POPULAR Computing WEEKLY

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17-23 April 1986

Vol 5 No 16


£2000 WORTH OF PRIZES TO BE WON WORD WIZARDS SEE P21

Amstrad/Sinclair: more details emerge

- QL rights may be bought by independent consortium if Amstrad uninterested
- Backers for Sir Clive's new companies named
- Sir Clive rejected alternative deal in favour of Amstrad's £5m buy-out

Full details below and inside

MORE information is now coming to light about the future of Sinclair computers and Sir Clive himself following the

Continued on page 4 ▶

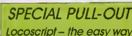


COLOUR FEATURE

Vortex's Alien Highway

A worthy successor to Highway Encounter?

SPECIAL PULL-OUT



Locoscript – the easy way

Graham Taylor demystifies the Amstrad PCW manual

Turn to pages 23-26



THIS WEEK'S NEWS

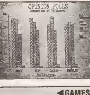
- *Acorn set to announce RISC technology deal*
- *Plus much, much more on that Amstrad/Sinclair deal*



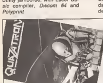
GREEN BERET
Imagine
...the name of the game
Konami
ARCADE HOT SHOT
£7·95 £8·95
WOOLWORTH, LASKYS, Rumbelows

April 17-23

Contents



SOFTWARE ▶



◀ GAMES

SPECIAL FEATURE ▶

◀ PROGRAMMING

REGULARS ▶

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ABC

Amstrad/Sinclair: QL survival seems likely after all

◄ continued from page 1

shock announcement by Amstrad that it has bought Sinclair's computer business for £5 million (see *Popular Computing Weekly* April 10)

It now looks likely that the QL will survive in some form Last week, Amstrad's chairman, Alan Sugar claimed that he didn't see much future in the QL Even if Amstrad does decide not to pursue marketing of the QL however, it looks as though it may survive A consortium of independent companies, which have supported the QL in the past, plan to buy rights to the machine, if Amstrad doesn't wish to The consortium would then hope to upgrade the QL to 512K include a 3½ inch disc drive and use a full 68000 processor

Sugar – not much future in QL

Sinclair Research staff are reportedly angry at the fact that Sir Clive rejected an alternative take-over offer which would have meant Sir Clive losing overall control of the company but which would have retained the Sinclair brand name Sir Clive has said that he did not feel the other offer was plausible, although it was strongly supported by Bill Jeffrey the company's chief executive

Concerning the Spectrum, speculation has risen concerning the configuration of Amstrad's enhanced version of the Spectrum due out according to chairman Alan Sugar, this Christmas The speculation refers specifically to reports that Sinclair Research was developing a new games-orientated machine at its headquarters in Cambridge with a larger memory (256K) and possibly using credit-card style software cartridges which Sinclair also had plans to implement in Pandora the portable micro

Whether Amstrad bases its redesigned Spectrum on the current model or a forthcoming machine it is certain that it will follow the 'one-box' principle which Amstrad has held for its entire product range

However it is now thought that the company may be able to offer it at a price below the £139 quoted by chairman Alan Sugar last week

Sir Clive Sinclair meanwhile, still has three projects under his wings telecommunications Pandora and wafer scale integration

Pandora's development will continue under the aegis of his holding company, the other two being run by separate satellite companies The number of staff who will continue to work on these projects is unclear – over 100 redundancies have been made at Sinclair

The backer apart from Sinclair and initial funding by Barclays for the new companies has turned out to be Timex one of Sinclair's erstwhile creditors It was Timex which bought the marketing rights to the flat-screen TV earlier this year

Sir Clive – rejected alternative deal

Sinclair has always kept very quiet about its telecommunications division in Winchester where research on cheap cellular telephone technology and it is thought, cheap satellite dishes has been carried out over the last two years

Acorn closes in on RISC technology licensing deal

ACORN Computers recovering from its cash crises of last year, is set to announce a licensing agreement for its advanced RISC (reduced instruction set computing) project

An unnamed major microchip group has been involved with Acorn in negotiations for a deal on the RISC microprocessor Discussions have reached an advanced stage and Acorn expects to make the announcement this month

RISC chips are extremely fast 32-bit processors – Acorn's own prototypes can handle up to three million instructions per second Research into RISC technology has been carried out for some time now – Acorn's own project has been going for nearly two years – but mainly in the USA

Last August Acorn claimed a world first in producing RISC chips, but no products using the processors are expected in the next year or so

MUD rival planned by Compunet

NOT content with running MUD (Multi-User Dungeon) Compunet is currently developing a new multi-user game provisionally called *Federation II*

Federation II will be a space trading and travelling game, with around 6000 locations

Although it is set to be previewed at the Commodore show in May it will not be up and running until next year

Dealers cut by major US companies

HIGH computer stocks and slow growth in computer sales in the US have resulted in one of its major manufacturers Apple, cutting down on its authorised dealer outlets

Apple has dropped 600 of its 2600 dealers in the States This follows a move by IBM which announced at the end of last year that it would will not be adding to its list of 2500 dealers

Spectrum 128 compatibility: Speedysoft updates the list

SPEEDYSOFT the dealer which is testing Spectrum games for compatibility with the new 128 (see *Popular Computing Weekly*, April 3, and also this week's letters) has now updated its lists

Speedysoft maintains that the titles listed below will all run happily on the 128

Arnhem, Desert Rats Nato Alert (CCS) *Astronomer 2 Bridge Player 3* (CP) *Austerlitz Redcoats* (Lothlorien) *Avalon Dragontorc Southern Belle Quazatron* (Hewson) *Barry McGuigan* (Activision) *Bored of the Rings* (Delta 4) *Combat Lynx* (Durell) *Commando, Roller Coaster* (Elite) *Complete Machine Code Tutor* (New Generation) *Emerald Isle Red Moon Worm in Paradise* (Level 9) *Enigma Force* (Beyond) *FA Cup Football Now Games 2* (Virgin) *Falklands 82 Swords and Sorcery* (PSS) *Fighter Pilot* (Digital Integration) *Fourmost Adventures* (Global) *Graham Gooch's Test Cricket* (Audiogenic), *Green Beret Ping Pong, Yie Ar Kung Fu World Series Basketball* (Imagine) *Gunfright Knight Lore Nightshade* (Ultimate) *The Hobbit Lord of the Rings Terrormolinos Fist* (Melbourne House) *Hocus Focus* (Quicksilva) *Nick Faldo's Open, Core* (Argus) *The Quill Illustrator Patch* (Gilsoft) *Amazon Women* (US Gold) *Masterfile* (Campbell) *Match Day Superbowl* (Ocean) *Monopoly* (Leisure Genius) *Samantha Fox* (Martech) *Spitfire 40* (Mirrorsoft) *Steve Davis Snooker* (CDS) *Tasword 3* (Tasman) and *Think!* (Ariolasoft)

Thumbs up for *Yie Ar*

Speedysoft stresses that the versions checked are current ones only If a title is not in the list, it is quite likely to mean it has not been tested, not that it doesn't run It can be contacted at 37 Church Street, London SW13 (01-846 9353)

Penman goes portable on its plotter

PENMAN Products which made the award-winning Penman Plotter has announced a new model in the range

The first is a battery powered version of the plotter, designed as a portable, lightweight alternative to the original model

Weighing 1½ kilograms, the battery is rechargable and the package comes with a combined mains adaptor and charger unit.

The battery charged Penman Plotter costs £349 Details from Penman at 8 Hazelwood Close Dominion Way Worthing West Sussex (0903 209081)

Ultimate's Cyberun arrives at last

CYBERUN the long-awaited new game from Ultimate, and its first under the US Gold banner, has been released

More of a space shoot 'em up than other recent Ultimate releases *Cyberun* uses multi-coloured graphics rather than the two-colour displays pioneered by *Knight Lore* and *Alien 8*. *Cyberun* costs £9 95 on the Spectrum

Hawson turns attention back to the Spectrum

HEWSON has announced a follow-up stylistically speaking to last year's successful *Paradroid* for the Commodore 64

The new game, *Quazatron* is a Spectrum title, and has you ridding the city of Quazatron of various robots The action takes place on a solid 3D landscape on a number of levels

Quazatron will be released at the beginning of May at £8 95 Initially it will only be available for the Spectrum, and is compatible with the 128

L9 latest enhanced for Spectrum 128

LEVEL 9 has developed an enhanced version of *The Price of Magik* for the Spectrum 128 – which is contained on the same cassette as the 48K version

The 128K implementation has extra text plus a new feature, an 'oops command This enables you to take back a move when you make a mistake or get killed Level 9 also says mysteriously that some less polite synonyms for oops " are permitted

The Price of Magik should be released next week Like other Level 9 games it will be £9 95

Ambyte comes to CPC disc users' rescue

AMBYTE is a new company set up to help CPC 664 and 6128 owners use cassette-based software The company will duplicate cassette software on to 3 inch disc for customers, but is only charging the cassette-based price for each title

So far, agreements have been signed between Ambyte and 19 major software houses to allow their software to be duplicated from tape to disc Customers can order a number of programs which will be placed on a single disc which particular titles is entirely up to the buyer's specification

Ambyte should be fully operational, on a mail order basis only, by the end of May Enquiries to 200, North Service Road, Brentwood, Essex (0277 220573)

Incompatible?

I am writing about the list of games compiled by Speedysoft and printed in the News Desk of the April 3 issue

Of the 28 games listed as incompatible with the Spectrum 128 I have five *Hypersports* (Imagine), *Impossible Mission* (US Gold), *Knights Lore* (Ultimate), *Way of the Tiger* (Gremlin), *Winter Games* (US Gold)

These games would not load using the Tape Loader routine, but by selecting 48K Basic on the menu screen and loading in the normal way *(Load "")* all the games then load and run The only game I could not get to load on the 128 was *Skyfox* by Ariolasoft.

Jude Williams
Abbey Wood
London SE2

Enigma Force, Impossible Mission, Movie, Swords and Sorcery Winter Games and *Way of the Tiger* all work fine on my machine

Richard Hewison
Luton

I have copies of *Swords and Sorcery* (PSS) and *Steve Davis Snooker* (CDS) which both load and play on my Spectrum 128 Admittedly they will not load in 128K mode

Perhaps Speedysoft neglected to clean their tape head as Phil Rogers is continually exhorting us lesser mortals to do

Hugh Walker
Burphaw
Surrey

I am in disagreement with some of the titles said to be incompatible *Alien 8, Enigma Force Knights Lore Nightshade Now Games 1* and *They Sold a Million*

I found that all of these loaded in the normal manner then played as normal on my Spectrum 128

Robert McBride
Glasgow

PS *Spy Hunter* loads works up to a point then freezes

Okay, we get the message But remember that Speedysoft did say it tested versions it had currently in stock. Anyway, see this week's News Desk for an updated list – of those that do work, this time.

CORRECTION

In the copy for the Touchmaster competition (*Popular Computing Weekly*, March 20), we stated that the Touchmaster graphics tablet was operated by an electronic stylus. Not so! The stylus is made of plastic.

System failure

I recently bought a copy of Rainbird's excellent *Art Studio* for my ZX Spectrum Although this program is protected by Lenslok, the system works perfectly on my television Why then does the same system fail to work with Firebird's *Elite?* One can only conclude that it is the software which is to blame

The important question is will Firebird undertake to replace all existing faulty copies of *Elite* with new debugged versions

Andrew Wiseman
Huntingdon
Cambs

An innovator

I am writing with regard to the selling of the Sinclair Research product range to Amstrad as disclosed today

Is it not the case that Sinclair Research is perceived as a genuine 'computer company' whereas Amstrad is a 'marketing company'? Without doubt Sir Clive has been responsible for the generation of more employment than any other microprocessor related product manufacturer While Alan Sugar has been content to wait until a market appeared and then exploit it (sound business sense no doubt) Sir Clive has been an innovator of the highest order

The miniature radios pocket calculators, miniature TVs 8-bit microcomputers, 16-bit microcomputers, flat screen TVs, microdrives and C5 vehicles have all been original products the nature of their fabrication leading to low prices

Some Sinclair products turned out to be unprecedented failures others have maintained a healthy commercial existence but it is, of course, for the 8-bit microcomputers

'Does he take sugar?

that so many must be grateful to Sir Clive By taking what would be for most people enormous financial risks, Sinclair *created* the homecomputer market as we know it Countless numbers of hardware and software companies, magazine publishers and retailers (with their supporting industries such as cassette duplication, printing advertising) all owe their existence to Sir Clive

Am I overstating the case for Sinclair? Not at all, for without him computers would would still sell at the silly prices originally demanded by Acorn and the American manufacturers

We are always quick to laugh at the Sinclair C5 but please remember that it's through Sir Clive's willingness to produce such products that you are reading this magazine today Will Alan Sugar give us as much?

J D Lawson
Managing Director
Eigen Software

Problem-solver

I should like to take this opportunity of replying to your correspondent, D A Snoad who had his letter published in the April 10 issue of *Popular Computing Weekly* concerning the Amstrad PCW 8256

I am a Saturday assistant with one of the major high street stockists of the Amstrad PCW 8256 and PCW 8512 and consequently being interested in computers, I am a demonstrator and general problem-solver' for the Amstrad range of word-processors

Mr Snoad states that he wonders whether the Amstrad is a suitable business computer My answer to this is most definitely yes For £460 you cannot really go wrong in purchasing this machine for your business For your money you get a full (very good) wordprocessor This wordprocessor, in my own opinion, is better than *Easyscript* for the Commodore 64, is equivalent to *View* on the BBC, but not as good as *Wordstar* (at about £345) which far exceeds the facilities offered by *Locoscript* But note, the price of *Wordstar* is almost the same as the Amstrad PCW 8256!

Also, with the sytem, you receive CP/M Plus So, if Mr Snoad so desires, he could purchase a copy of *Wordstar* and have all the features that he wants

The manuals supplied with the machine are not the greatest of manuals, but could anyone show me a manufacturer who has supplied a good initial manual with their computer? If Mr Snoad had purchased a Commodore 64 and had a look at the manual supplied with that machine, I think that he would agree that the manuals supplied with the Amstrad are in fact very good

It is a fact that the manuals are deficient in certain parts especially in the formatting and copying of discs but in our shop we have been able to overcome this problem and will go through the procedure with any customers having this trouble I would recommend that Mr Snoad goes back to the shop from where he purchased his computer to see if they can help him

The views expressed in this letter in no way represent the views of the company for whom I work

Marc Bray
Merseyside

Atari group

I would like to ask through your magazine, for any Atari 8-bit owners in the Glasgow area to contact me with a view to forming a user group

Allen O Neill
53 Gilbertfield Rd
Ruchazie
Glasgow
G33 3UD

Laser Compiler

Oasis Software's *Laser Basic Compiler* is now available for all the machines that the Basic itself runs on The principal aim of the program is to allow you to compile any games written with the Basic into stand alone machine code

However because *Laser Basic* is itself an extension of the standard resident Basic for these machines, you also get for your money a compiler that will work on programs which don't use any of the Laser Basic commands

Of the three versions the Commodore has the most features You are given both a floating point (ie slow because of some seemingly incontrovertible technical reason) compiler that will handle any keyword or a much faster integer-only compiler It can also save the resulting program in a turbo-load form

The Spectrum version is a full floating point compiler with very few restrictions but it is therefore a bit slow The main attraction may only be to those who have *Laser Basic*

The Amstrad version is conversely integer only and cracks along at quite a speed As is frequently pointed out most games software can easily be written in integer only form (although the illustration of how to produce a circle without using *Pi Sin Deg* etc shows that floats can be important in some obscure places)

First impressions on using the compilers are that they emphasise just how brilliant the *Laser Basic* interpreters are The graphics routines are already nearly as fast as they can be and compiling either makes little difference or makes them too fast! Ordinary Basic logic is dramatically speeded up using integer only

I was a bit disappointed with the documentation, as not all restrictions on use seemed fully explained but on the whole it is a valuable release for everyone who is getting good results from the Basic

Tony Kendle

Program *Laser Basic* **Micro** Amstrad CPC, Commodore 64/128 Spectrum **Price** £19 95 **Supplier** Ocean IO 6 Central Street Manchester M2 5NS

```
POLYPRINT   PAGE   FORMATTING

A  [illegible]          Centre        text text text text
B  TEXT WIDTH           104 mm.       text text text text
C  LINES PER PAGE       RR            text text text text
   CHARS PER LINE       RR            text text text text
   RIGHT JUSTIFY?       Yes                    :
   START PAGE No.       1             <-B->(------- ] -------)
   STOP  PAGE No.       64                     :
   ESCAPE                             text text text text
                                      text text text text
```

Polyprint

Polyprint is a utility that not only has a serious application but is also cheap enough to be bought just for fun Basically it will print out any Ascii text file (with the appropriate embedded commands if required) in a variety of different typefonts These range from something known as "minuscule print", suitable for printing very wide files such as spreadsheet dumps to "Cooper Black (large)" which is big and bold and suitable for titles and headings

The fonts are high quality and they all print clearly on the PCW printer The largest are suitable for posters etc If you tire of those supplied on the disc you can write off for another selection

If you have a word processor such as *Newword* that will let you create multiple column pages you can use *Polyprint* to add headings for a reasonable *Pagemaker* type program

Because the characters of the fonts vary so much in size *Polyprint* is capable of re-formatting any document itself so that the print fits within specified limits of page width and length

Using the program is extremely simple – based on a mixture of direct menu choices and command embedded in the document – but getting the right results will be a case of trial and error for the first few attempts

Presumably because producing Ascii files from *Locoscript* can be a hassle (impossible for early versions) you are also provided with a free program called *Polyword* It is a word processor, which uses *Wordstar* like editing keys but, like *Tasword* it produces plain Ascii files This is invaluable in itself if you ever want to make changes to a file that you have converted to Ascii form

A good value release that has the added advantage that it has been extremely well implemented on the PCW – very good use is made of all the special function keys and none of the installation is left up to the user

Tony Kendle

Program *Polyprint* **Micro** Amstrad PCW **Price** £29 95 **Supplier** Newstar 200 North Service Road Brentwood Essex

Discom 64

If the use of a computer is an essential part of your business life it figures that a lot of confidential or personal data will be stored on it. It also goes without saying that the thought of someone copying some of your files, for whatever reason, can cause a small business person sleepless nights

Do not despair for Imcom has come up with a package that performs a variety of functions including a version of Commodore Dos and a file maintenance system

Best of all though are some pretty nifty security routines for your precious files One of them is *Delete Directory* which does just that so when the directory is loaded (which it appears to do), nothing in fact happens, when listed! Once this device is selected the disc cannot be copied

Another of my favourites is *Repeat Directory* which just replays the directory endlessly without allowing the user entry into the programs on the disc

There are a number of other useful programs available like a disc back up and a disc protect but it's the security aspect that I find most appealing

Andy Moss

Program *Discom 64/1541* **Price** £14 95 **Micro** Commodore 64 with disc drive **Supplier** Imcom, 96 Worcester Road Malvern, Worcester WR14 1NY

Cut and Paste

This word processor program is aimed at people who don't have the first idea about a) using a computer and b) using a word processor It's billed as the remarkably simple word processor and it is – well sort of! You see it offers you automatic word wrap and editing cut and paste facilities, block indenting tab and printer commands but that's all Important commands such as centring or justifying are not present

You can see the level it is aiming at, by a quote from the manual "You use your cursor keys (the ones with little arrows on them) to move this bright little block (the cursor) over the names you want to get"

Okay bringing out a simple no frills utility is useful but it must not sacrifice quality for simplicity

The screen has a menu running across the bottom accessed by pressing *Esc* Press the arrow keys to select a command, hit *Return* to execute it All files can be saved, and the program does have a back-up facility which is heartily recommended Buy this package to get the feel of word processing as a stand alone utility, it's not versatile enough to compare with its more powerful competitors

Andy Moss

Program *Cut and Paste* **Micro** C64/128 Atari 800 **Price** £24 95 **Supplier** Ariolasoft, 68 Long Acre London WC2





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PROGRAMMERS REQUIRED

Beyond Software are seeking proficient programmers for the **Spectrum, CBM 64, Amstrad** and **Atari ST** computers for development conversion and technical work. We have a high throughput of programs scheduled for 1986 and require talented people to work freelance under contract.

You should be able to demonstrate a high level of proficiency, preferably with experience in games programming/playing.

Rates of payment will vary according to the project, but will certainly be commensurate with the top level of work expected.

You would be expected to work from home, where necessary assistance will be given with hardware and software.

We also require original products for publication, if you have a completed program or detailed game specification please submit it to us.

So if you feel you could produce quality work and enjoy challenging programming, then please write to **Peter Moreland, Production Manager, Beyond Software, Wellington House, Upper St. Martin's Lane, London WC2H 9DL.**

Not just a wordprocessor . . .

Tony Kendle debunks the myth thet the PCW machines are only wordprocessors. With CP/M Plus, there is a surprising variety of packages available spreadsheets and databases, including the big deddy of them all, Dbase II

For those adventurous users who see their PCW as primarily a general purposes CP/M Plus computer, there is a wide and rapidly expanding choice of highly respected programs available at bargain prices that would have been unbelievable just a year ago

Companies such as William Poel's Newstar have done a superb job in negotiating price cuts, but there are one or two things to bear in mind when buying these 'cheap' programs The average price is £50 which is peanuts to a business, but not to an individual

Secondly, most of the price reduction is explained away as a 'reduction in aftersales service' In plain English the companies are no longer prepared to spend hours on the phone explaining the program and solving your problems. In such cases the quality of the documentation becomes important

The two main categories of serious computer applications (other then word processing, for which see pages 23-26 in this issue) are spreadsheets and databases

The function of a database is pretty obvious – it should at the very least be able to store data efficiently sort it into order, select subsets of the data based on specified criteria be able to print out the selected data and save it as a separate file

The two simplest programs available are Saxon's *Flexifile* (£39.95 but with a throwaway Wordstar mini-copy word processor for £49.95 total) and Caxton's *Cardvox* (£99.99) At those prices it is obvious which to go for the far too brief manual of *Flexifile*

A small step up in power comes with Camsoft's *Cambase* (very attractively designed and excellent value at £39.95) and Sage Software's *Database* (£69.99) The latter can produce mail letters and envelope labels without a word processor Saxon also sell a label printer addition and some ready made 'database templates' for different applications

Flexifile

To be honest, if you are new to databases you will probably find that even the simplest will do everything thet you ever wanted to do So just go for the cheapest – at least until you know exactly what else you wish you could do

The real star of the database market is Ashton Tate's *Dbase II* which is a database language rather than just a program It is very powerful and is THE business database, but unfortunately Ashton Tate is still living in the past and refuse to drop the price from a staggering £395 They may come to the same solution as Micropro did with *Wordstar* and repackage the program as *Mickey Mouse's Database* or somesuch

In the meantime if you really need something special and you have a PCW 8512 or a second disc drive look at Compsoft's *Delta 1* (£99.00) It's another data management language with a friendly front end, and if not quite as powerful as *Dbase* it is way beyond most programs

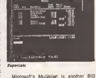
Speadsheets let you create large numerical calculations based on columns rows and cells of data linked to each other by formulae Like a word processor you can simply edit some of the data (eg, to reflect annual sales) and the program instantly works out the implications through all of the formulae

If your requirements are pretty mainstream there is little to challenge *Supercalc 2* which is another extremely famous and respected business program, but sold at a giveaway £49.00 The manual is a model to in the computer industry

The Cracker is a strong competitor to *Supercalc* because of its friendliness and flexibility it is very hard to make mistakes with *The Cracker* and you are also provided with simple database facilities superb graph and chart displays which must be one of the strongest selling points, peripheral control (it can run your central heating!) label printing etc, etc It is an excellent value buy if you want one program that does everything but not surprisingly it isn't the largest capacity sheet around

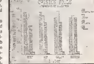
Caxton makes that claim for their *Scratchpad* which uses the disc to hold data that overflows the memory This is £69.00 but for a limited period you get a free program called *Smartkey* that lets you assign extended functions to different keys on your computer.

Comshare's *Plannercalc* (£39.95) is also pretty famous – it finds a niche by emphasising its business planning aspects rather than number crunching so it has less versatile calculation options but is simple to use It is supposed to have a good manual, but I find it dull and unenlightening Masterplanner (£69.00) is an expanded version – more versatile and again with the ability to use disc storage for data that doesn't all fit in memory


Supercalc

Microsoft's Multiplan is another BIG name in the spreadsheet world Again you won't go far wrong with this but as £69.00 there is no real need to pay the extra unless you need its very clever capacity to link several data files together

One of the obvious uses for a spreadsheet is to keep personal accounts and I must throw in a quick plug for a dedicated program, *Money Manager*, (£23.95) from Connect Systems It is good enough to make most programs of this type give up in shame


Graphics on The Cracker

My personal tips are *Cambase Flexifile, Supercalc Cracker Money Manager*

Where to get them

Try Newstar Software 200 North Service Road Brentwood Essex

Timatic Systems Fareham Market, Fareham Hants Load and Run PO Box 123 Dartford DA1 5AA

Software City 382 Kings Road, Chelsea, 14 Thames Street Kingston and 47 Cheap Street Newbury

Connect Systems are at 3 Flanchford Road, London W12 9ND

Tony Kendle

Games: Reviews

Quazatron

I ve been a Steve Turner fan for years – yes – I was up till the early hours wondering what to do with the fish in *Avalon* I sucked up to those annoying elves in *Dragontorc*

As for *Astro-Clone* well – I found it an uncomfortable mix of arcade and adventure Was Steve losing his touch we all asked ourselves? With the release of *Quazatron* the answer is an emphatic no

Any Spectrum owner that enviously coveted their Commodore owning friends (at least while *Paradroid* was up and running) need fret no more as Quazatron heavily draws on elements from that particular hit enhances the strategic element and presents it in a *Gyroscope* type 3-D enviroment. Yup – that good!

Your basic mission is to go forth where Paradriod influence devices have failed, into the Droid inhabited city of Quartech (impenetrable to normal attack) and take out everything in sight the problem being that you start out with severely "entry-level" hard ware, and your power unit is just about to burn out. Quite a challenge really

Your only advantage is the Grabber' device, which allows you to attempt to take over any enemy droid you encounter in a *Paradroid* type 'Battle of the circuit board ' Selection of opponent is important as not only must you not take on something too beefy but as after the event, you are going to incorporate what s left of it into your own system (it s what s known as upgrading) you need to know what type of Droid carries the best Drive System, Power Unit or, say Weaponry

But come to think of it, would you prefer a Linear type Power unit, or a Gravitronic Mk 2 what is the best Chassis type Coralloy or Trialium? Get the idea?

Add to this the plain blasting elements the fab graphics and the sheer professionalism of the programming – you ve got yourself another clasic

John Cook

Program *Quazatron* **Micro** Spectrum **Price** £8 95 **Supplier** Hewson 56b Milton Trading Estate Milton, Oxon OX14 4RX

Return to Ithaca

Troy has fallen courtesy of the wooden horse and the victorious Greek horde has returned home – all that is except Odysseus

It seems the fool missed the boat and so forced to journey alone took 10 years to get back to Ithaca

So goes the fable and so goes the adventure from Atlantis and I might add, it will probably take you 10 years to solve it.

This is a *Quilled* adventure (actually *Quilled* and *Illustrated*) and full marks to the authors for owning up to it Although you can t mistake the now familiar blue background and "have a nice day tag at the end of play

They have created a text rich descriptive narrative, with some fine locations to explore but, unfortunately haven't paid enough attention to the vocabulary

Hence finding exactly the right words to use becomes a long process of trial and error

A little more time and effort to incorporate as many words as possible in the vocabulary would have given this adventure a more professional feel

While I'm complaining I ve also seen better examples of *The Illustrator* at work and these graphics do little to add to the atmosphere of the tale, although they do only appear the first time you enter the location which is a saving grace There are, few errors in the routines – I had a rope which decided to disappear along with some exits but generally it flows pretty well

At the beginning of the program the authors modestly announce their next release – I ll be interested to see if they can improve on this one It's certainly not perfect but at £1 99 it s the right price

Andy Moss

Program *Return to Ithaca* **Micro** Spectrum **Price** £1 99 **Supplier** Atlantis 19 Prebend Street, London W1 8PF

The Last V8

The Last V8 caused quite a stir in the computer press when it was first released on the Commodore 64 Great sound by Rob Hubbard good graphics and synthesised voice all for under a fiver! Having given the original such rave reviews, I eagerly anticipated the conversion to the Atari (a machine, which at worst is comparable to the Commodore for sound and colour)

Imagine my despair, when I finally cast my eyes over said conversion Where is the voice synthesis so loudly acclaimed on the packaging where have all Rob Hubbard s great sounds gone in fact where is the game that I thought I was going to play?

The actual plot is all about a race against time trying to reach your underground base before a nuclear bomb drops In any other car your mission would be a non starter, but in the ultra fast V8 you do have a slim chance It s a shame that this is a poor implementation of the original, and it's made worse by a car that is practically impossible to control

If you haven't seen the original this game is an average release if you have seen the Commodore version weep along with me

Andy Moss

Program *The Last V8* **Price** £2 99 **Micro** Atari 800XL/XE **Supplier** MAD Games Mastertronic, 8-10 Paul Street London EC1

Computer Hits

The compilation has now become so common that we can see trends developing amongst the different types This one belongs to the history lesson providing ten programs from the last two or three years Some good some bab, some so-so

Most of the program here though, make a welcome addition to your collection if you haven't already bought them *Codename Mat* was a much praised title in its day, a *Star Trek* game combining shooting and strategy as you clear up the universe sector by sector Though the graphics are far from 86 state of the art it still plays well

More recently *Wizards Lair* brought Bubble Bus into the Spectrum public s eye and it's still a wonderful copy of Ultimate circa *Sabre Wulf*

No history lesson would be complete without platforms and ladders and *Technician Ted* was the one that everyone raved about after Jet Set You-know-who and it still stands up fairly well today

Covenant

Mutant Monty though shouldn t be confused with the mole of a similar name – it's an Artic maze game which is fairly simple in appearance but Okay

Visions' *Snooker* was a workmanlike adaptation of the tele-dominating sport though it isn t the most playable version imaginable

Android 2 is no more than a maze game with nice graphics though it's rather addictive and *On the Run* is a similarly simple concept, though not quite so addictive owing to its tendency to dump you into perilous situations

Covenant was a personal favourite when it appeared last year and *Superpipeline* is well worth having at this price Finally there's *Circus*, an adventure, which, though it never achieved the fame of Level 9 s offerings still seems to keep the helplines busy

By spreading these ten over two tapes there s not too much searching and there's not really a major failure amongst them Providing you don't already have too many of them or suffer an allergy to straightforward games that don t require a PhD to understand then you'll find this a Beau-jolly good show **John Minson**

Program *10 Computer Hits 2* **Price** £9 95 **Micro** Spectrum 48K **Supplier** 29A Bell Street, Reigate, Surrey RH2 7AD

Charts

Amstrad

1	(3)	Way Of The Tiger	(Gremlin Graphics)	£9.95
2	(1)	Spindizzy	(Electric Dreams)	£9.95
3	(2)	Last V8	(Mastertronic)	£2.95
4	(–)	Into Oblivion	(Mastertronic)	£1.99
5	(4)	Rambo	(Ocean)	£8.95
6	(10)	Finders Keepers	(Mastertronic)	£1.99
7	(9)	Computer Hits 10 (2)	(Beau Jolly)	£9.95
8	(8)	Formula One Simulator	(Mastertronic)	£1.99
9	(–)	Chiller	(Mastertronic)	£1.99
10	(7)	They Sold a Million	(Hit Squad)	£9.95

Atari

1	(1)	Last V8	(Mastertronic)	£9.95
2	(3)	Action Biker	(Mastertronic)	£1.99
3	(8)	One Man And his Droid	(Mastertronic)	£1.99
4	(5)	Fighter Pilot	(Digital Integration)	£9.95
5	(7)	Steve Davis Snooker	(CDS)	£9.95
6	(–)	Strip Poker	(Artworx/US Gold)	£9.95
7	(8)	Spy v Spy 2	(Databyte)	£9.95
8	(4)	Chimera	(Firebird)	£9.95
9	(9)	Mercenary	(Novagen)	£9.95
10	(–)	Goonies	(US Gold)	£9.95

BBC

1	(1)	Commando	(Elite)	£9.95
2	(3)	Winter Olympics	(Tynesoft)	£7.95
3	(2)	Karate Combat	(Superior)	£8.95
4	(9)	Yie Ar Kung Fu	(Imagine)	£9.95
5	(6)	Comp Hits 10 Vol 2	(Beau Jolly)	£9.95
6	(7)	Citadel	(Superior)	£9.95
7	(4)	Phantom Combat	(Doctorsoft)	£9.95
8	(–)	Tennis	(Bug Byte)	£2.95
9	(–)	Strike Force Harrier	(Mirrorsoft)	£9.95
10	(8)	Way of the Exploding Fist	(Melbourne House)	£9.95

Commodore 64

1	(2)	Uridium	(Hewson Consultants)	£8.95
2	(–)	V	(Ocean)	£8.95
3	(1)	Superbowl	(Ocean)	£9.95
4	(3)	Hardball	(US Gold)	£9.95
5	(4)	Ping Pong	(Imagine)	£8.95
6	(6)	Zapp Sizzlers	(Gremlin Graphics)	£9.95
7	(–)	Computer Hits 10 Vol 2	(Beau Jolly)	£9.95
8	(7)	Kane	(Mastertronic)	£1.99
9	(10)	Yie Ar Kung Fu	(Imagine)	£8.95
10	(–)	Electra Glide	(English)	£8.95

Spectrum

1	(1)	Green Beret	(Imagine)	£7.95
2	(4)	Bomb Jack	(Elite)	£7.95
3	(5)	Way Of The Tiger	(Gremlin Graphics)	£9.95
4	(3)	Superbowl	(Ocean)	£9.95
5	(–)	V	(Ocean)	£7.95
6	(8)	Incredible Shrinking Fireman	(Mastertronic)	£1.99
7	(7)	F A Cup Football	(Virgin)	£7.95
8	(–)	Samantha Fox Strip Poker	(Martech)	£7.95
9	(–)	Starstrike 2	(Realtime)	£7.95
10	(–)	Devils Crown	(Mastertronic)	£1.99

All figures compiled by Gallup/Microscope

Top Twenty

1	(3)	Way of the Tiger *(Spectrum/ Amstrad/ MSX)*	Gremlin Graphics
2	(–)	Green Beret *(Spectrum)*	Imagine
3	(1)	Superbowl *(Spectrum/ C64/ MSX)*	Ocean
4	(–)	V *(Spectrum/ C64)*	Ocean
5	(4)	Bomb Jack *(Spectrum)*	Elite
6	(8)	Last V8 *(C64/ Amstrad/ Atari)*	Mastertronic
7	(14)	Computer Hits 10 (2) *(Various)*	Beau Jolly
8	(6)	Commando *(Spectrum/ C64/ BBC/ C16)*	Elite
9	(15)	Formula One Simulator *(Various)*	Mastertronic
10	(5)	Ping Pong *(Spectrum/ C64/ Amstrad/ MSX)*	Imagine
11	(11)	Yie Ar Kung Fu *(Various)*	Imagine
12	(7)	Uridium *(C64)*	Hewson Consultants
13	(9)	F A Cup Football *(Spectrum/ C64/ Amstrad)*	Virgin
14	(19)	One Man And His Droid *(Various)*	Mastertronic
15	(12)	Action Biker *(Spectrum/ C64/ C16/ Atari)*	Mastertronic
16	(–)	Finders Keepers *(Various)*	Mastertronic
17	(19)	BMX Racers *(Spectrum/ C64/ Amstrad/ C16)*	Mastertronic
18	(–)	Bandits at Zero *(C16)*	Mastertronic
19	(–)	Mr Puniverse *(C16)*	Mastertronic
20	(13)	Rambo *(Spectrum/ C64/ Amstrad)*	Ocean

Figures compiled by Gallup/Microscope

Readers' Chart No 70

1	(1)	Elite *(Spectrum/ C64/ Amstrad/ BBC)*	Acornsoft/Firebird
2	(2)	Uridium *(C64)*	Hewson
3	(5)	Commando *(Spectrum/ C64/ C16)*	Elite
4	(4)	Lord of the Rings *(Spectrum/ C64/ Amstrad)*	Melbourne House
5	(7)	Swords and Sorcery *(Spectrum/ Amstrad)*	PSS
6	(6)	Yie Ar Kung Fu *(Spectrum/ C64/ Amstrad/ BBC/ MSX)*	Imagine
7	(3)	Movie *(Spectrum)*	Imagine
8	(–)	Gunfright *(Spectrum/ Amstrad)*	Ultimate
9	(–)	Hypersports *(Various)*	Imagine
10	(9)	Winter Games *(Spectrum/ C64/ Amstrad)*	Epyx/US Gold

Winning Phrase No 70: ' Red smile if Everton go" from Elaine Hudson, of Walton on Thames, in Surrey who wins £25 An honourable mention goes to M C Crawford of Harrogate (why are they so good at anagrams in Harrogate?) he "ITV motel no file here!"

Now voting on week 72 – £25 to win

Each week *Popular* is compiling its own special software top ten chart – compiled by YOU

And each week we will send £25 to the person who sends in, with their chart votes, the most original (witty neat or clever – but never rude) phrase or sentence made up from the letters (you don t have to use them all) in the titles of the top three programs in this week s Readers Chart, published above

You can still vote in the chart without making up a slogan – but you won't be in with a chance of winning the prize

All you have to do is fill in the form below (or copy it out if you don t want to damage your magazine) and send it off to Top 10, *Popular Computing Weekly*, 12-13 Little Newport Street, London WC2H 7PP

Voting for Week 72 closes at 2pm on Wednesday April 23, 1986 Entries received after that time will not be eligible for inclusion in that week's ending The judges decision is final Only one entry per individual per week will be allowed.

Name..................................... **My top 3: Voting Week 72**

Address.................................. 1.....................................

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.... 3.....................................

My phrase is:...

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The Road to Oblivion

Graham Taylor, armed only with a laser-equipped dustbin, ventures once more down Vortex's Highway

Highway Encounter was to my mind one of the great Spectrum games of last year Few other games mixed technical ingenuity with original thought and pure addictiveness in quite so perfect a blend I remember still the opening moments of the game, when the intrepid troupe of vortons set off one behind the other on their journey down the alien highway a journey from which they were unlikely to return – if the flames didn't get them the dreaded ergonomically designed eyes would surely end their little metallic lives It brings a lump to the throat I can tell you

Alien Highway is the sequel and if it largely repeats the ideas of the original game well, who cares, it's still about a million times more entertaining than most of the other games released this week The basic plot still has your vorton pushing a small pyramid along an alien road absolutely chock full of danger Most notably, those damn eyes are back again

The Plot

There are important differences between *Alien Highway* and *Highway Encounter* In *Alien* you get only a single vorton (a sort of dustbin with laser), which loses energy whenever aliens bump into it or whenever it crashes against the side of the road

Another key aspect is the idea that the terratron (the little pyramid) must be pushed through seven key energising points found scattered about the 30 screens that comprise the highway This means that you have to learn how to manipulate the vorton very precisely to push the terratron exactly where you want it

Get the terratron to the final screen and something (Vortex the publisher, won't say what) dramatic happens

Graphics

Very reminiscent of *Highway Encounter* The graphics are highly detailed with the central playing area restricted to black and white only presumably because of colour attribute problems But there are plenty of colourful and changing alien landscapes to admire along the highway embankment and the sprite design is full of personality These roving eyes look and act genuinely malevolent

The terratron reaches a regeneration point

Sound

Rarely a strong point with Spectrum games, but the machine's limited resources are well used here for assorted blasting and laser effects

Playing Tips

There is no single solution to the game but lots to watch out for

1) Each time you play the game the layout of screens is generated afresh – this means you should never rush into a new screen without carefully checking to see what's ahead first.

2) Try to conserve energy, the only place to build up lost energy is a terratron regeneration point (see below) and the next one may be a long way away

3) You must push the terratron through each of the seven regeneration points on the route – don't miss one

4) Don't linger against obstacles it wastes time and in some places may lose you energy

5) It is sometimes possible to take a mad rush at an obstacle and get through without losing too much energy – sometimes it may be worth it you have to judge

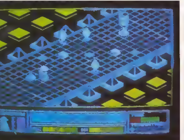
6) If the terratron gets stuck against the edge of the road it is possible to get it out the the centre again by very careful manipulation of the vorton – press against the terratron at an angle and you should be able to slide it out

7) Some aliens wander around, others home in on you – learn to distinguish which does what!

8) The barrels only become essential in the later sections of the game You may be able to manage early sections without them but suddenly find one is essential and it's several screens back. So

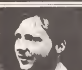
9) Get used to the idea that you may have to go backwards

Stuck barrel-less before the deadly 'lemons'



Amstrad and Spectrum versions of *Alien Highway* should be released this week. Prices are Spectrum £7 95, Amstrad tape £8 95, Amstrad disc £13.95

Vortex is at 24 Kansas Avenue, off South Longworthy Road, Salford M5 2GL (061-872 4747)



Late releases – whose responsibility?

This week, Tony Kendle, concludes that some games are delayed by the very nature of their sophisticated quality. Plus: *International Karate* (does it out-fist *Fist*?), and tips for *One Man and his Droid*, *Dragonskulle* and *Who Dares Wins II*

Picture *Way of The Exploding Fist* with very similar sprite design, the same joystick control better graphics and faster and more vicious in the way it plays. Is it the long awaited *Fist 2*? No, it's *International Karate* from System 3 software on the Commodore. It's a fascinating game, the most intriguing questions being who they are aiming it at and will Melbourne House ail back and take the competition?

There's been a lot of 'borrowing' of graphics style in the past (Ultimate having suffered more than many) but this must be the first time that the design has been so well accurate.

In the meantime, if you haven't got a copy of *Fist*, you really should consider this alternative as it is a better game.

You may have seen in the news pages recently that there's been a lot of concern lately from all sides of the industry about games that have been continually advertised and which do not appear or, when they do finally come out, are of such a poor standard that you wish they hadn't bothered.

I've had more than a few complaints sent to me about this recently and I must confess that my attempt to do a roundup of software available for Christmas and the new year was a bit abortive because we are still waiting to see some of the releases.

Still it's difficult to know what to say. In almost no case can it be blamed on companies trying to pull a fast one on the public – it can't be Ocean's idea of fun to put out expensive full page colour ads fro *Knight Rider* etc with nothing to show for it. The real problem is down to a combination of the long advance warning required by the monthly mags for adverts together with an increasing reliance on freelance programmers.

PROFESSIONAL DESIGN

The standard of games releases are now far beyond that of just a year ago – programmers are pushing home computers to a level of performance we would have only expected on 16-bit machines. Graphics are reaching new heights thanks to the use of professional design specialists and almost every spare byte of Ram is being used. It is no wonder that prices are slowly (or not so slowly) creeping up and development times are longer.

A couple of years ago the freelance programmers were being heralded as the saviour of the industry, freeing producers from the expense of trying to keep a full time working team. Now the wheel is turning as some programmers are finding the expected standards are too high and the promised delivery dates (on which advertising is based) are impossible. For its part the producing company have to decide whether to pull the plug on its investment so far (eg Elite's *Basketball*)

Infinite lives on Who Dares Wins II – see below

or to continue with the eventual hope of results like Ocean has.

It is companies like Virgin with its in-house team the Gang of Five that seem to be suffering least – probably because they can more accurately judge exactly when a game will be ready.

VICIOUS CIRCLE

All of this leaves us with a vicious circle and no one really to blame. The future looks especially grim for the next generation of 16-bit machines where the same problems can only be magnified. What do you see as the solution? Write in and let us know.

In the meantime it is nice to see that some programs come out on time and that they are still worth playing. Elite has had its Spectrum version of *Bomb Jack* in the shops almost as soon as the adverts appeared and another excellent arcade conversion it is too, good enough to challenge *Commando*. The Ocean/Imagine combo has also scored two hits in my book with *Ping Pong* and *Batman* (just when you thought all *Knight Lore* style games were totally boring, along comes one that brings a new touch of fun to the format and I look forward to hints and tips on these.

COMMODORE TIPS

I'm still getting the odd letter form people who are having trouble with the Commodore *Elite* editor program – the solution to the problem was that by the action of some gremlin the lines containing the data for the save routine and the data for the space stations were mixed up. A more detailed solution has been printed in the magazine on the letters page, so check your back issues.

This week we have some tips for the Commodore from Chris Eastwood who has found all of the passwords for the game *One Man and his Droid*. Starting with level two these are in turn bubble, Commodore, finders, genetic, zapped, magasonic, time warp, ectoplasm, gorgeous, seaside, gizmo, King Kong, hologram, curry rice, coffee, cassette, telescope, computer, adacreeda.

Tips for hacking into *Dragonskulle* have been sent by a few people, including our old friend Mr Wass, but to get them to work you need a reset switch. Load the game, reset, and type the following

For × =5300 to 5500 *Poke* × 234 *Next* ×
SYS 3080

Then press *F1* and hit *Runstop/Restore* and type the following

For × = 5500 to 5510 *Poke* × 234 *Next* ×
SYS 3080

Finally press *F1* and you start the game with infinite lives.

To finish this week here is a welcome routine from Kevin Young for the Amstrad version of Alligata's *Who Dares Wins 2*. Type in the listing and save it, then run it. Rewind the game tape and press play – don't worry about the screen display.

The game should load with infinite lives and 99 grenades. Do not pick up grenades until you are down to two or three or the number will go down to the same as those in the box you picked up. There are some odd side effects – your bullets become smaller and soundless and the enemy plane also has no sound as it approaches – beware!



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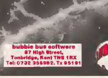
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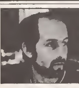
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Return to PCW subs, 12-13 Little Newport St., London WC2H 7PP





Solo quest

For those who were intrigued by my mention of *Lentils of Thry* by Peter Page, here is his address (and my apologies for having left it out!) 3 Larwood Square Cricketers Way, Andover, Hants SP10 5DR

Peter is hoping for a major company to take up the adventure and it is certainly as good as many commercially available He hasn t told me what sort of price tag he has put on it, or even, indeed if he wants to sell the game by mail order – but you might feel it worthwhile to drop him a line

From Maland Software (29 Moorland Road, Mickleover Derby DE3 5FX) comes *The Doomsday Papers* at £2 95, a little steep when you consider superlative programs like *Spellbound* (anyone who can help me on this, give me some hints!) I think that it is really about time that adventure-writers started to think about their pricing policies maybe I m being a little harsh on Maland, as the price is not as inflated as others

This adventure is *Quill'd* and *Illustrat d* In the year 3050 the human race appears to be extant only on the planet Alta-Ren, now racked by nuclear devastation Instigated by the evil Professor Deemus Where there's an evil scientist, there is a good one and Professor Ferric has decided to go back in time and find The Doomsday Papers written by the scientists forced by Deemus into building the nuclear weapons now threatening the existence of the human race Your mission as Professor Ferric's apprentice is to find the Doomsday Papers and thus save the transplanted human race

To start with, the game is rather easy and linear Nice graphics, with lots of technical detail, are let down a little by an un-touched character set and rather sloppy spelling and text layout You have a few moves in which to collect the necessary objects for your quest, and then you re in a spaceship which after a couple of "Wait s, crashes, leaving you alone on a strange planet.

The opening problems are not brain-achingly difficult Here is a spade lying about on a sandy plain Oh, my let s dig – oh, wow here s a pen! And here s a lump of meat just lying around the floor Is it here for picturesque atmosphere? No way! Pick it up and few locations later, you ll get to use it (and you re told exactly what to do with it)

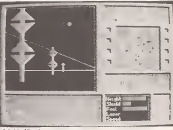
Neither *Search* nor *Examine* seem to be implemented, but this may prove untrue as other commands like *Dig* elicit no response until needed But there is a strength to the program, and this lies in the rather short but nevertheless atmospheric descriptions and some surprises Like the "hissing" in early scenes which turns out to be the innocuous (as long as you are wearing the space suit!) workings of the airlocks later you blithely and innocently walk into another location from which emanates more hissing , only to find a lethal snake pit!

All the usual Petch features, including sound effects and Ramsave are included in *The Doomsday Papers* and on the whole the adventure would be an excellent buy at a pound less

CRL is one of those software houses that always seem to come up with a surprise from awful dross like *War of The Worlds* to the sublime state-of-the-art of *Tau Ceti* Clement's Crew can be relied upon to keep us guessing And with *Causes of Chaos* they ve given us adventurers a nice little number I'm glad to report

Written by one Michael Taylor and available for the Commodore 64 *Causes* is an unusual multi-player text adventure That is the player can elect to play solo or with up to five like-minded companions A very impressive loading screen leads on to a colorful screen multi-coloured text against a bright white background might be too much for some tastes but it is clean-looking and legible

For the soloist the adventure plays very differently from the multi-player version In the latter case each player starts at a different location, and a certain number of pre-determined moves (between one and nine) are allotted to each player moves that can be used in the usual adventure pastimes of exploring, object-getting and puzzle-solving It's possible of course for each player to aid the others in their quest, but human nature leads me to think that it will be a good old free for-all all round!



Tau Ceti, state-of-the-art

Each player will find a dagger about their person, which can t be dropped and it is this weapon, initially that can be used for combat This relies mostly on successive rounds of reflexive key-punching in an effort to whittle down your opponent s 50 combat points.

It's a nice attempt to bring a *Mud*-like environment to the micro of the modemless adventurer The game itself, though set in the standard fantasy scenario is a nicely-tuned set of puzzles which is good enough to keep the solo player engrossed while offering good entertainment to the group I ve always thought that adventures are better tackled en masse and *Causes of Chaos* is a great combination of bash-about and puzzle-solving which you ll find all the better in company

Adventure Helpline

Going bananas? If you are stuck in an Adventure with nowhere to turn do not despair – help is at hand

Fill in the coupon explaining your problem send it to us and a fellow adventurer may be able to help.

Remember – the system only works if those adventurers who have solved the puzzles get in touch. Every week is Save An Adventurer Today (SAAT) week!

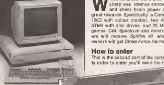
Adventure .... on (Micro) ....

Problem ....

Name ....

Address ....

Free hardware here



Welcome to the Word Grid where a sharp eye intense concentration and sheer brain power can win great rewards Specifically a Commodore 128D with colour monitor two Atari 520 STMs with disc drives and 25 Mirrorsoft games C64 Spectrum and Amstrad owners will receive *Spitfire 40* while BBC owners will get *Strike Force Harrier*

How to enter

This is the second part of the competition In order to enter you'll need the first part from last week's issue, as well as the third part to be published next week

Each grid contains six words (of at least four letters) related to microcomputing The words may be written forwards or backwards up or down (but not diagonally)

Once you ve found the 18 words hang on to them – there will be a tricky bit in part four You didn t think it was going to be that easy, did you? Experienced gridrunners will place a regular order with their newsagent now

M	E	M	O	R	Y	O	F	W
O	R	Q	U	L	O	C	O	O
N	Q	C	T	O	C	T	A	L
E	C	A	F	R	E	T	N	I
T	O	T	F	M	O	Q	T	O
W	U	O	H	R	P	Q	Z	W
O	P	C	O	D	E	M	N	T
R	H	Y	C	H	B	I	B	E
K	O	E	W	U	T	R	O	N

Locoscript – all you ever need to know

Frustrated by the manual? Graham Taylor nibbles his way through the complete Locoscript menu

Locoscript, the wordprocessor supplied with the PCW 8256, and supposedly the reason most people have bought the machine in the first place, is exceptionally powerful. It is also fair to say that the manuals supplied with it are causing more confusion among more people than with almost any other wordprocessor ever.

In this guide, Graham Taylor, who has been battling with *Locoscript*, offers vital help to those who are about to join the fray – not a complete rewrite of the manual, but the solutions to most of the problems most people will discover.

Before we start

Certain things are vital in order to use *Locoscript* at all for your own writing

1) Buy some more 3 inch discs and format them using Disckit.

Disckit is found on the second side of the CP/M disc – reset the machine by switching it off and on – or holding down *Extra* and then pressing *Shift* and *Exit* and then pressing *Shift* and *Exit* together. Then insert the disc so that side two points towards the screen. When you get the *A>* prompt type *disckit*, or *DISCKIT*, then follow the on-screen instructions

2) Having got a formatted disc you can now use *Disckit* again to make a copy of *Locoscript*, nb. think of a Read disc as the original you want to copy and Write as the copy you are making and follow the on-screen instructions

Vital tips

● If something goes wrong and you seem to be lost in the jungle of menus press the *Call* key, which is just above and to the right of the *Return* key

● Whenever you are making a selection from one of the menus

Highlight the option you want. Pressing the + key next to the spacebar says 'yes' to an option, while the – key says 'no', ie, switches an option off. Leave menus by pressing *Enter* (not *Return*)

● Never use the Ram drive (drive M) to store your documents. Always use a or b (if you have b fitted)

Getting going: The main menu

A common problem here is moving around the screen. The key is this: to get to some of the groups on the top of the screen – the unused ones in particular – you need to use the cursor keys with *Shift*. Remember also the following

1) You may have eight groups to a disc. Any you have not used will simply be shown as *Group 5* or whatever

2) The columns showing the contents of each group may sometimes be offscreen. Always check there is nothing 'off' to the left or right using the cursor keys

3) A group that does not contain any documents yet will be shown in the bottom section of the screen as two parallel vertical lines when you place the cursor over it

At the main menu stage these options are available

● *F1 Disc Change* Press this key after you have inserted your own data disc, ie your own formatted disc containing your letters, documents, etc. This key tells *Locoscript* to read your disc and update the display information accordingly

● *F2 Inspect* You can set up information that is not part of a document you have created but which quickly summarises its contents. Pressing this key show this descriptive text for whatever document the cursor is currently over. To set up your own text press *F7* whilst you are working on a document and then choose the *Edit Identity* option – now you can type in your descriptive text

● *F3 Copy* This is quite simple to use – place the cursor over the document you wish to copy, then press *F3*. Now move the cursor to the new group to hold the copy. Note that you can rename the document by typing its new name on the menu that appears if you wish

There are various reasons you might want to make a copy of your document on disc: safety (having a backup on another disc), making a dummy file for re-use, ie supposing you want to send a fairly similar letter with only a few differences between each one to a number of people. You could write the letter once, save it, then make a copy called something like *Dummy, Doc*

This document could then be used again and again by using *Copy* to make a new version, edited to include with the specific details of this version of your letter

● *F4 Move* Exactly the same as copy except that the original document is moved completely, ie the end result is only one copy of the document, not two as with *F3*

● *F5 Rename* Press this key to change the name of a document or group. You will want to do this when you set up a new group of documents. Supposing you want to start a Group called *Complain Ltr*. The first thing is to choose one of the unused groups (just called group four or group eight, etc, on the main menu) and then rename it. A document can be renamed in a similar way for various reasons (see *F3* above for an example)

NB The 'recovery from limbo' option (see below for more on 'limbo') on *F5* is used when you wish to recover a document that you have accidently erased but has not yet actually been lost, ie, its space overwritten with other files

● *F6 Erase* There are two levels of erase. Normally you place the cursor over the file you wish to remove. Then press *F6*, also check the details which *Locoscript* displays and if all is well press *Enter*

A file erased in this way is not lost forever should you have made a mistake. It is stored as a 'limbo' file. This means that the space it takes up on the disc is now available for use if necessary, but whilst this space is not actually being used the file may be recovered. However, if you use *F8* to show *Limbo* files so that their names appear on screen, and then you erase it as a limbo file, then it really is gone

● *F7 Modes* Doesn't do anything at the

Command	What it does	Switch off?
Bold	Makes text following it darker	Yes
Centre	Centres text following it	No
Double	Darkens printed text like *Bold* above	Yes
Italic	Printed text is italicised	Yes
Keep (no of lines, ABOVE to be kept together)	Lines specified above this point are not broken by a new page, eg use if you want to make sure a paragraph is not divided over the page	No (*Keep* on the minus menu keeps lines BELOW together)
Layout (no)	Use the layout number specified from this point	No (Pressing layout on minus menu returns to the original one)
Line Pitch (no)	Changes number of lines printed per inch – either six or eight	No (press *Pitch* on minus menu to return to original)
Line Spacing (no)	Gap between lines when printed	No (press *Line Spacing* on minus to return to original)
Last Line	Next line begins a new page	No
Last Page Number	Inserts number of last page	No
Pitch (no)	Changes width of characters, eg 10,12 15 17, proprtional	No (press *Pitch* on minus menu to return to original)
Page Number	Insert page number	No
ReVerse	Shows text as black characters on green backgrouhd	Yes (returns to normal display)
Right Justify	Text to be justified right ie, ends against right margin	No (only works on current line)
Subscript	Text dropped below normal base line eg in writing a chemical formula	Yes
SupeRscript	Text raised above normal base line, eg, squared sign in maths	Yes
Underline	Everything underlined including spaces	Yes
Word Underline	Only text underlined	Yes
Unit	Pressing *Unit* key moves to a marked in text placed using Unit code	No
– Hard Space	A space in text created after this will not be broken by a new line eg a name will *not* be divided over two lines	No (Using the minus menu sets a soft space, ie, a place a break *may* occur, but which will not otherwise be printed as a space)
– Hard Hyphen	As above except hyphen instead of space	No (sets soft hyphen and works as above)

moment except repeal some of the basic options and make ASCii files (more on this later) it is designed for use with add-on packages which may become available

● *F8 Options* Used to show the names of *Limod* files on screen (See *F6* and *F5* above) Hidden files are like *F7*, associated with add-on software

Working on the text

There are a lot of menus in *Locoscript* but you need very few of them Most commands can be accessed with around two button presses using the instant menus Here s how with a quick guide to what does what

Basic text commands like underline, centre, bold, italics and so on, can be accessed from two menus associated with the + and – keys By pressing the plus key and holding it down you will get the switch on menu You can get this menu even more quickly by pressing + together with the checkered key in the middle of the cursor cluster

In order to switch off a command, eg end a section of italics, you need the minus menu, which is revealed when you press the minus key (with the checkered key for speed) You will see that some commands on the plus menu are not found on the minus menu This is because some commands only operate on a single word, line or letter and so need not be switched off Above we show you what does what

The base layout

This mysterious term is responsible for more confusion amongst *Locoscript* users than almost any of the others For one thing it seems to throw menus up on screen you hadn t anticipated What on earth does it mean?

There are two key elements to the base layout. In one respect it works just like a normal layout – you can set up tabs of various sorts, organise margins, change justification, etc The difference is that this layout is treated as a standard – it is the one you get on first loading your document and thus becomes the standard used unless you specify otherwise by setting up a new one

It is also used to set up information to be printed in the header and footer zones – those areas not normally available to text at the beginning and end of each page The sort of text you might want is a standard heading, eg Guide to *Locoscript* and a final phrase eg, *more follows* together with a page number It is a powerful feature usually associated with very expensive facilities These include making *Locoscript* automatically place different headings on left and right pages (a common formality with books), and number each page You can also tell *Locoscript* to put a special phrase at the end of the last page eg *ends* Below we set out what commands you need to get where to do what, on headers and footers

Press *F7* (modes) and select the first option offered – *Edit Header*

On the screen will appear a layout which seems to demand you type something into it. Don't be daunted Ignore it for the moment and press *F7* yet again

You will see a new range of options some of these are standard ones like Style, others are not too important, like Tabs, but F8 Pagination is the one you want

Pagination

This option puts up a lengthy menu which allows you to indicate your chosen page structure In a rare moment of total clarity the options on this page *mean what* they

Pagination:
First page number 1
All pages same
First page differs
Last page differs
Odd/even pages differ
First page
Header enabled
Footer enabled
Last page
Header enabled
Footer enabled

say and don't require much further explanation

Suffice only to add, that headers go in the space at the top of the page before the first line of your text and footers go at the end. As ever, move the bar to the combinations you want and press the plus key to select.

Paper

Obviously exactly how large the area set aside for headers and footers will be depends on how large the paper you are using is. Most *Locoscript* templates are set up on an assumption that you are using A4 single sheet paper, or the most standard form of continuous stationery. This is logical enough. Setting the parameters for your own obscure length of paper is probably best accomplished by trial and error. Here's what you do.

In *Edit Header* mode, press *F7*, then press *F7* and then press *F7* again (I'm sorry about this). The last *F7* should have been for page size. This is another fairly self-explanatory menu, provided you remember a few things.

```
Printer idle   Using A:
f6-Breaks   f7=Page size   f8=Pagination
   Page size.
   Page length        2
   Header zone        9
    position          2
   page body         66
   Footer zone        7
    position         60
```

Your text does not begin on line one as *Locoscript* thinks of the whole paper when counting lines. Thus the page length is not how much copy you can write on a page but the length of copy plus your choice of space for header and footer. You need at least nine lines of space for the header for the practical reason that the printer uses a certain amount of space merely to grab hold of it. Anything above that is a matter of what looks right on your document; the same is true of the footer.

To return to the *Page Size* menu, enter the number of lines that make up a whole page of your paper (if in doubt try about 75 for single sheet).

Move the bar to cursor zone and indicate how many lines you require for your header section (at least nine) and move to the line called *Position*. This is the place in the header that your heading or other comment will occur, eg, just before the text or just near to the top of the paper. The same process applies to the header and footer position. You will see *Locoscript* performing some stunning calculations as you do this, working out 75 - 8 - 5 or whatever. The end result is the page body, ie, what's left over.

Having done all this you can now decide what you want to actually put in the header and footer zones by way of text and numbers. You can use all the usual *Locoscript* features to centre/italicise/embolden your text (switch them off in the usual way), but the chances are the thing you will definitely want is a

Page Number

You don't get a page number by typing in a number. What you want instead is a code, which indicates to *Locoscript* that here is a

```
Editing pagination.                    Printer idle   Using A:
Layout                                 Page ----   Line --
f1=Show   f3=Emphasis   f4=Style   f5=Lines   f6=Pages   f7=Options   f8=Blocks
        (Centre)          PC      9/10 Help   Page layout:
——end of header 1 : used for all pages——       end page here
        (Centre)                              Last line of page
——end of footer 1 : used for all pages——      Keep lines together
——end of header 2 : used for no pages at all——   Above
——end of footer 2 : used for no pages at all——   Below
                                              Insert page number
                                               This Page Number
                                               Last Page Number
```

Why use alternative word processors on the PCW machines?

Although the PCW can be used as a very versatile computer, there is one type of program that it appears not to need – a word processor. But even though both machines come supplied with *Locoscript* there are many people that have chosen to use a CP/M Plus alternative, almost invariably *Wordstar* or the cheaper and rather better *Wordstar*-lookalike, *Newword*. What are the advantages in making this superficially unnecessary, purchase?

Newword, in particular, is more powerful than *Locoscript* when it comes to some specialised applications. Most importantly it comes supplied with a superb spelling checker program and also has a built-in mail-merge option which is the ability to read information such as names and addresses from data files and insert these in the correct places in a standard letter. These features and others (such as the ability to 'un-erase' deletions) are not supplied as standard with *Wordstar* although you can find package deals.

On a more mundane level, *Locoscript* has some irritating features, unimportant to most people but infuriating to some: early versions cannot save files as plain Ascii (free of hidden control codes and suitable for use in Basic or by other programs). To get to the the end of a long document means scrolling past every page, and just try merging in some Ascii files (it would almost be quicker to retype them from scratch).

Another reason is personal preference – if you are doing lots of work it makes sense to use programs you like. *Locoscript* is a good attempt at producing a program that beginners can use but it is laid out in a way that many experienced users, with their preconceptions of what a word processor should be able to do and how it should work, find windy to say the least. More tangibly, although there are now courses on using *Locoscript* appearing, you will still find that any general word processing course you may take will teach *Wordstar/Newword* because they are the most common programs around.

Wordstar/Newword have their greatest strength in the fact that the computer industry has standardised around them. A vast number of CP/M Plus programs, and programs that run on completely different computers use exactly the same layout of editing keys. Learn *Newword* and you may be very much in demand. It is also much easier to communicate between programs. Databases such as *Flexifile* can send data already configured for *newword* mailmerge. The *Cracker* spreadsheet can read *Newword* document files as well as Ascii. The list goes on and on.

On a more advanced level many printing and typesetting companies can work just from a *Newword* format disc file rather than from printed copy. You can decide the page breaks, etc, and be sure that there will be no errors from retyping.

It is also possible to upgrade to a 16-bit computer such as an IBM PC compatible and still run *Newword*, but with many extra features such as auto-indexing. You can even insert the required control codes for the advanced *Newword* into files created on the 8-bit machine. They will only come into operation on the larger computer. Its supplier, Newstar, will provide more details if you are interested.

Locoscript is a quality program, and as a freebie it's excellent, but one should be aware of the alternatives.

Newword is £69.00 from Newstar Software, 200 North Service Road, Brentwood, Essex. *Pocket Wordstar* is £49.95 (now including mail merge) from Quest International Computers Limited, School Lane, Chandlers Ford, Eastleigh, Hants and others. *Pocket Spellstar* is £39.95.

Tony Kendle



place where the current page number must go Thus *Locoscript* automatically numbers pages for you

The only thing that prevents this option from being a totally wonderfully, totally clear *Locoscript* command is that you need another set of commands to indicate how much space is to be allowed for the number Here are the details

When you are at the 'typing in headers and footers' stage, using the little on-screen layout press *F6 Pages* At the bottom of this menu is a line saying, 'Insert page number' Put the cursor over this option, press *Enter* and behold a code for page number appears at the last cursor position But it isn t as simple as that – you must now specify space for the number and must indicate by your choice of space code whether the number is to be to the left, right or centred in the space provided

The Page Codes:

\= = = means centre the number in the space provided and allow three spaces for the number (ie, 999)

< < < < means space for four numbers put as far over to the left as possible

> > means space for two numbers as far over to the right as possible

And so on

The biggest problem with *Locoscript* is that it is impossible as it stands, to use the files you create with it with any other CP/M program

This unlike the situation with files produced by most other CP/M word-processors which can be used quite freely with other sorts of program – particularly mail merges (a program which lets you customise a basic letter to include names and addresses and other details taken from a database)

Mail merge means, for example only one thank you letter at Christmas with the names of the appropriate auntie inserted in the right place and the relevant gift matched to each auntie

Select mode submenu

Grab your document from main menu

Locoscript files are chock full of all kinds of bizarre codes which makes them very non-standard and thus unusable with other packages But there is one way out.

Ascii files

The more recent versions of *Locoscript* have a facility to create a special version of your *Locoscript* document in the form of an Ascii file – this is the format required by other CP/M packages To see if you have this option press *F6 Options* If you have 'make Ascii file as an option at the bottom then compatability is possible – at a price

When you select 'make Ascii file as an option you are then presented with two further choices *Page Image*, or not. *Page Image* means that *Locoscript* will insert spaces to maintain the overall look of your document For simplicity s sake, however, since you'll probably have to reformat the text anyway, I'd choose the other option and go for the simple text file

Important: When you are asked to choose which destination group to create the Ascii version of your document in, always choose a group whose number is 0, ie, the first one in the list.

If you choose any other group you will suffer unbearable agonies wondering where your file has gone to when you *Dir* the disc

The reason for this is that *Locoscript* uses a feature of CP/M called User Numbers as part of the filing system Essentially the Group number on *Locoscript* is the user number for the files under CP/M

User Numbers

Ordinarily when you use *Dir* on a disc and are shown the files on disc, you are actually being shown only those files which have a User code of 0

You're not missing out on much unless you filed something under a specific user number since there probably won't be anything there

User numbers (CP/M command In User = [number up to 16]) are simply a way of making discs easy to use – the idea was developed in the days when vast numbers of people were sharing a disc

CP/M software packages usually work on the assumption that files they are to use will be filed under user 0 (ie, the ordinary one) Some will not allow you to copy a file from one user number to another You can be left in the position of *knowing* your file is on the disc but having the software stubbornly refuse to admit its existence That s why you should always put your Ascii file into Group (= User) 0

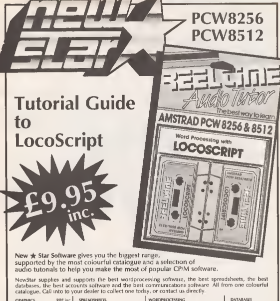
Using the Ascii File

The new version of your document is now compatible with many other CP/M packages, for example, the excellent *Word* spelling checker However, it has lost all the special formatting codes that *Locoscript* put in your document when you created your layout It is just a stream of words and spaces and you will have to lay it out all over again

Summary

It is not worth using the Ascii option on highly formatted documents (ie, those chock full of tables, lists, etc) but if you have a very 'plain' document – perhaps just text and paragraphs – it may be worth it For example, you can write your novel, save it as an Ascii file, run that Ascii file through *The Word* and get the spelling mistakes corrected

The corrected file cannot be loaded as a *Locoscript* document It has to be loaded from within a document as a block Select *F7* in the main document menu and choose *Insert Text* Although any original formats are gone, it is at least easy to reformat the file, according to the basic template for the group of the document you have created


new star
PCW8256
PCW8512
Tutorial Guide to LocoScript
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The best way to learn
AMSTRAD PCW 8256 & 8512
Word Processing with
LOCOSCRIPT



Run your own board without breaking the bank

David Wallin looks at a budget software package for would-be sysops.

Hardware support: FBBS supports these modems – (left) the Demon, £72; (bottom left) Le Modem, £100; (below) the WS200, £100; and the Nightingale, £135

This week I'm going to talk about FBBS

First, as you have probably guessed, FBBS is the name of a type of bulletin board software as in TBBS, SBBS, NBBS, etc It's the software which the host computer runs on, not your software

It stands for Finchley Bulletin Board Software and has not previously been very well known compared to TBBS or, in particular NBBS on the BBC but in the past months the number of boards running on it has more than doubled

FBBS runs on the BBC B with disc drives There are quite a few BBs running the FBBS software now, including Marctel run by Marcus Anselm Marcus was responsible for writing FBBS and he offers a good after-sales service as well If he makes improvements to the software then he lets FBBS sysops download them to their boards In fact Marctel seems to be off-line most of the time while he makes these improvements!

Marctel "The FBBS H Q ", run by Marcus Anselm
01-346 7150 24 hours a day 1200/75 and 300/300
Torture Chamber run by Gandalf Sorcerer
021-455 1219 24 hours a day, 1200/75 and 300/300
Compost Heap, run by David Martin
0622 48036, 24 hours a day 1200/75 and 300/300
Dragon s Lair, run by 'Arthur Dent'
01-502 4543, 24 hours a day, 1200/75 and 300/300
Musictel run by James Eckhardt
01-458 0843 24 hours a day 1200/75 and 300/300 I have found this to be off-line a few times an on ring-and-ask This one has music programs for users to download These are for the BBC and are of a high quality, many are produced using sound samplers and digitising devices
Malcolm Systems run by Malcolm Carter and Danny Zargel
01-458 9704, 24 hours a day, 1200/75 and 300/300
FBBS – Swansea run by Tim Scorman
0792 203953, 24 hours a day 300/300 baud only
NB, FBBS – Jersey no longer exists

See what FBBS has to offer BBS running Marcus Anselm's software

Why is FBBS selling fairly well? Well it s very cheap, only £10 so budding sysops can afford to buy it and if their board collapses then they have only lost £10 as opposed to about £50! FBBS also has lots of features, which include offering Mode 7 (BBC) colour for compatible micros and full documentation provided, meaning that no knowledge of Basic or computers is needed to run it Anyway you can always log on to Marctel and ask Marcus what to do if you get stuck

ADVENTURE

All required page editors are provided, while files, such as Bulletin Board lists and title pages can be prepared on *View* or *Wordwise* word processors, making editing and creation of these files very easy

All of the usual BB features sigs messages, chat to sysop, upload/download software etc are on there It also offers on-line adventure games through these are SUDs not MUDs (one player playing at one time only)

FBBS works with the Demon modem, Pace's Nightingale Minor Miracles WS-2000 and Watford Electronics Le Modem

To run a FBBS board you will need at least 400K of disc storage 200K will do but the BB won t be very good The software can use any combination of drives 0, 1, 2, & 3 that hardware can provide

So if you re a budding BBC sysop, why not take a look at FFBS?

On Marctel Marcus uses a BBC B, Acorn DFS 1.2 800K of disc drive storage a Pace Nightingale modem and FBBS software

Remember though, running a BB means that your computer will be unavailable for your general use a lot of the time since you will have to leave the board on-line Further details of FBBS software can be got from either going into chat mode or leaving a message to the sysop on the Marctel board

New BBs appearing this week include A-Board International Bulletin Board but it s quickly become known as just 'A-Board to keep things simple. It's on-line 24 hours a day, but because it's new it may be off-line from time to time being de-bugged The sysop is William Holmes, the number is 0643 590000 and it s 1200/75 and 300/300 baud

Calling all new or soon-to-be sysops. If you are a sysop of a new BB then let me know I ll publish it here and you may find you get some more users

If you have any queries, tips or comments to make about any aspect of micro communications David Wallin would love to hear from you

Write to him at *Popular Computing Weekly* 12-13 Little Newport Street London WC2H 7PP

TOOLBOX

by Paul Murray

In this second part of our Toolbox listing we present renumbering and auto line numbering facilities for your Spectrum

As we explained in the first part of the series the programs are presented as a series of machine code bytes which need to be loaded into your Spectrum using the Basic loader program we printed last week

Anyone who would like to have the benefits of the full Toolbox without having to type in the whole listings can buy a cassette of the program for just £3 by applying direct to Paul Murray (to whom cheques should be made payable) at 5 Hanham Mills, Hanham Bristol B15 3NU

Renumber

Improves the overall appearance and readability of the program This is a fully implemented renumber – permitting the renumbering of either the full program or a block of code Four parameters are required in order to use the program These are

ST=Start Line First line of program to be renumbered

FIN=Finish Line Last line of program to be renumbered

BV=Base Value First line number in renumbered block

INC=Increment Increment between successive lines after renumbering

These parameters are entered in Basic For example if *Let ST=105 Let FIN=260 Let BV=9000 Let INC=10 Randomise Usr 62704* is entered then lines in the range 105 to 260 inclusive will be renumbered from 9000 going up in steps of 10 All *Gotos, Gosubs, Restores, Save Lines* etc are altered accordingly

When called the program stores certain data on the screen, and it may appear that garbage has filled it This is however normal, and indeed essential for the oper-

62704	24	84	33	36	245	63074	205	232	25	193	235
62709	205	27	245	237	67	63079	3	3	10	111	3
62714	224	244	33	59	245	63084	10	103	11	11	11
62719	205	27	245	237	67	63089	35	35	35	35	235
62724	226	244	33	63	245	63094	120	86	87	121	75
62729	205	27	245	237	67	63099	95	197	213	237	91
62734	228	244	33	66	245	63104	75	92	253	203	71
62739	205	27	245	237	67	63109	134	167	229	237	82
62744	230	244	201	34	93	63114	223	32	10	253	203
62749	92	205	178	40	218	63119	71	198	229	9	34
62754	46	28	205	43	245	63124	236	244	225	205	85
62759	205	162	45	201	17	63129	22	253	203	71	70
62764	146	92	1	5	0	63134	40	6	229	42	236
62769	35	237	176	234	224	63139	244	34	75	92	225
62774	56	201	66	86	255	63144	35	235	225	193	229
62779	73	78	67	255	83	63149	197	237	176	34	236
62784	84	255	70	73	78	63154	244	193	225	237	67
62789	255	205	242	244	33	63159	222	244	205	232	25
62794	0	84	17	1	64	63164	42	236	244	237	91
62799	1	255	23	54	0	63169	234	244	167	237	82
62804	237	176	42	228	244	63174	225	209	40	21	229
62809	205	110	28	34	232	63179	213	237	75	222	244
62814	244	42	230	284	205	63184	42	234	244	167	237
62819	110	25	34	234	244	63189	66	34	234	244	209
62824	32	10	35	35	94	63194	325	25	195	74	246
62829	35	86	35	28	34	63199	42	232	244	35	34
62834	234	244	42	232	244	63204	83	92	17	64	1
62837	257	91	234	244	167	63209	213	253	203	71	142
62844	237	82	200	42	232	63214	70	35	78	43	197
62849	244	1	0	84	126	63219	229	35	35	78	35
62854	2	35	3	126	2	63224	70	43	43	43	237
62859	35	3	205	197	248	63329	67	222	244	167	205
62864	56	243	96	105	43	63234	136	25	56	68	34
62869	1	0	64	167	237	63239	95	92	231	254	237
62874	66	203	61	203	60	63244	40	76	254	236	40
62879	48	2	203	253	237	63249	72	253	203	71	206
62884	91	226	244	205	169	63254	254	247	40	64	254
62889	48	237	91	224	244	63259	229	40	60	254	225
62894	25	17	16	39	167	63264	40	56	254	240	40
62899	237	82	56	2	207	63269	52	254	248	32	15
62904	10	42	224	244	17	63274	231	234	13	40	10
62909	16	39	167	237	82	63279	254	58	40	6	254
62914	56	2	207	25	42	63284	202	32	243	24	33
62919	234	244	237	91	232	63289	225	193	209	229	237
62924	244	167	235	237	82	63294	75	222	244	35	35
62929	210	236	27	42	226	63299	113	35	112	225	20
62934	244	124	101	32	2	63304	24	159	35	237	91
62939	207	25	42	83	92	63309	75	92	229	167	237
62944	229	42	232	244	35	63314	82	225	193	193	193
62949	35	78	35	70	3	63319	32	141	201	35	126
62954	3	3	3	43	43	63324	205	182	24	40	36
62959	43	229	197	42	83	63329	253	203	71	78	40
62964	92	43	205	85	22	63334	4	254	13	40	206
62969	235	19	193	225	9	6333	254	35	56	235	254
62974	229	197	237	176	193	63344	45	40	231	254	46
62979	228	229	205	232	25	63349	40	227	254	43	40
62984	225	237	91	234	244	63354	223	254	48	56	186
62989	229	167	237	82	225	63359	254	58	48	182	24
62994	32	208	228	43	34	63364	213	43	34	176	92
62949	232	244	42	83	92	63369	35	126	254	58	40
63004	43	34	234	244	237	63374	10	254	13	40	6
63009	75	232	244	237	91	63379	254	33	48	162	24
63014	226	244	42	224	244	63384	240	42	176	92	43
63019	124	2	3	125	2	63389	43	43	43	229	17
63024	25	3	229	213	96	63374	146	92	1	5	0
63029	105	205	197	248	98	63399	237	176	239	224	39
63034	77	209	228	36	236	63404	49	55	0	3	2
63039	237	75	232	244	237	63409	164	56	205	162	45
63044	91	226	244	42	224	63414	42	228	244	43	167
63049	244	213	229	237	75	63419	237	88	48	8	42
63054	232	244	197	205	110	63424	230	244	167	237	66
63059	25	32	15	35	35	63429	48	4	193	195	57
63064	78	35	70	43	43	63434	247	237	67	236	244
63069	43	3	3	3	3	63439	225	43	126	254	201

Name	Start Address	Parameters
Renumber	62704	BV = Base value INC = Increment ST = Start line FIN = Finish line
Auto	63718	BV = Base value INC = Increment

ation of the program For very long programs, renumbering may take more than a minute

The program is fully error trapped and there are various error messages that may be generated

In cases where this occurs, no renumbering will have taken place Common error messages include.

Variable Not Found – One or more of the parameters was unspecified

Integer Out of Range – Renumbering using the specified parameters would lead to the generation of a line number of 10000 or more.

Parameter Error – Any of a variety of mistakes (eg, *Increment* was zero, *Fin* was less than *St* etc)

Care should be taken when renumbering since if a line number which already exists in the program is generated upon renumbering then the original line will be deleted.

This does not apply to lines within the block to the renumbered

Also, it is important to ensure that the value of the parameter 'ST' is *never* set to zero before calling the renumber routine, since giving the parameter this value will cause the routine to fail to renumber *Gotos Gosubs* etc

In order to renumber an entire program, it is recommended that the values ST=1 and FIN-9999 are used, as under normal circumstances these will encompass all line numbers used in a program

Auto

Provides automatic generation of line numbers when entering a program Two parameters are required, these are

BV= Base Value First line number to be generated

INC= Increment. Step between successive line numbers

These are entered in Basic Eg, entering *Let BV= 100· Let INC= 10 Randomise Usr 63718* would lead to the generation of line numbers from 100 going up in steps of 10 In order to stop line number generation, simply delete the line number which was last generated

63444	56	250	35	235	42
63449	176	92	35	213	205
63454	221	25	235	229	42
63459	222	244	167	237	85
63464	34	222	244	225	205
63469	229	25	237	75	226
63474	244	33	0	64	237
63479	91	224	244	229	42
63484	226	244	235	167	237
63489	82	235	225	229	42
63494	226	244	25	255	225
63499	126	184	40	19	48
63504	25	35	35	126	167
63509	32	237	35	126	43
63514	187	32	231	1	16
63519	39	24	10	35	126
63524	43	185	40	2	56
63529	231	68	75	197	205
63534	43	45	253	203	71
63539	134	239	192	2	36
63544	225	17	16	37	167
63549	237	82	56	21	235
63554	225	229	213	205	214
63559	248	205	82	22	207
63564	225	54	49	253	203
63569	71	198	35	24	4
63574	25	84	93	225	1
63579	24	252	205	135	248
63584	1	156	255	205	155
63589	248	1	246	255	205
63594	155	248	123	198	98
63599	225	245	205	214	248
63604	205	82	22	241	225
63609	119	35	1	6	0
63614	229	229	42	222	249
63619	9	34	222	244	225
63624	205	85	22	225	54
63629	14	35	17	146	92
63634	235	1	5	0	237
63639	176	195	57	247	175
63644	229	98	107	9	60
63649	36	252	257	66	61
63654	84	93	225	32	5
63659	253	203	71	70	200
63664	253	203	71	198	198
63669	48	245	213	229	205
63674	214	248	205	82	22
63679	225	209	241	119	35
63684	201	126	95	35	86
63689	19	25	237	91	234
63694	244	229	27	167	237
63699	82	225	201	229	42
63704	222	244	35	34	222
63709	244	225	201	0	0

CHECKSUM=134223

63718	33	25	249	205	252
63723	248	237	67	226	248
63728	33	25	249	205	252
63733	248	237	67	228	248
63738	24	36	34	93	92
63743	205	178	40	218	46
63748	28	205	12	249	205
63753	162	45	201	17	146
63758	92	1	5	0	35
63763	237	176	259	224	56
63768	201	66	86	255	73
63773	78	67	255	42	226
63778	248	237	75	228	248
6378	167	237	66	34	226
63788	248	42	61	92	54
63793	127	35	54	249	253
63798	54	49	2	253	203
63803	1	190	205	149	23
63808	205	176	22	42	226
63813	248	237	75	228	248
63818	9	34	226	248	93
63823	84	1	16	37	167
63828	237	66	48	68	42
63833	91	92	62	201	50
63838	123	248	253	203	71
63843	134	205	90	248	62
63848	1	50	123	248	34
63853	91	92	175	205	1
63858	22	205	44	15	205
63863	25	27	253	203	0
63868	126	32	16	42	89
63873	92	237	123	61	92
63878	205	167	17	253	34
63883	0	205	24	224	42
63888	69	92	34	93	92
63893	205	251	25	120	177
63898	32	10	42	61	92
63903	54	3	35	54	19
63908	207	255	237	67	73
63913	92	42	93	92	235
63918	35	85	21	229	42
63923	97	92	55	237	82
63928	229	96	105	205	110
63933	25	32	6	205	184
63938	25	205	232	25	193
63943	121	61	176	40	40
63948	197	3	3	3	3
63953	43	237	91	83	92
63958	213	205	85	22	225
63963	34	83	92	193	197
63968	19	42	97	92	43
63973	43	237	184	42	73
63978	92	235	193	112	43
63983	113	43	115	43	114
63988	241	195	53	249	3

CHECKSUM=32812



CAPSCLOCK

by David Witherow

Capsclock is a working program designed especially for use with *Quill*; I use it every day, and wouldn't be without it

Capsclock not only adds a clock to *Quill* in precisely that place on the screen where it will cause least inconvenience it also provides that most desperately needed of QL addenda a Caps Lock indicator

Run this program alongside *Quill*, and not only will you have eternity ticking away on the bottom line of the status area as you write, but you will see 'CAPS' added to the line above and, while Caps Lock is engaged a double-arrow sign will appear beside 'CAPS

Both clock and Caps Lock indicator look for all the world as if they were an integral part of Quill (at least if you've entered Quill using F1 if you use F2 you'll have to modify Capsclock slightly)

Of course Capsclock isn't part of *Quill*; and wherever you add anything to such a crowded screen there are bound to be occasional clashes If you have three typeface attributes engaged at once – say Bold, Underline High Script' – the third will be overwritten by the clock I can't honestly say I've found this to be much of a problem More seriously error reports appearing in the status area tend to be partly overwritten, but not badly enough to obscure their meaning so I regard this as acceptable

The Basic loader program printed this week will create a Capsclock EXECable file it needs to grab a chunk of the resident procedure space so it will only work if you have no other programs running When you run the loader program, you'll first be offered the choice of ignoring the checksums at the end of each Data statement: you'll see why next week. If you include the checksums the program will print the line numbers of all lines in which it finds errors, then it will stop so that you can *edit* any such lines After editing, rerun the program It will slice off another part of the resident procedure area but you will have to make a lot of mistakes before you run out of memory If you leave out the checksums or if all the Data lines are correct you'll then be prompted for a name for the *EXEC* file the program is about to create The name you enter should include the name of device that you want the file to be saved on for example, *mdv1_filename*

Before you run the EXEC file created by the Basic loader, make sure you've saved a copy of the loader program End-of-line checksums are not foolproof in particular they won't notice if you've transposed two numbers on the same line *EXEC*able files, however do not take the same cavalier attitude towards the order of their bytes, they can do nasty things if they're not exactly right So save a copy of the loader program, and use a Microdrive cartridge with no important files on it when you *EXEC mdv1_capsclock* for the first time

To run Capsclock with *Quill*, once you've created an *EXEC* file use the following procedure (If you have discs just amend the device name to suit unless you rely on *flp* use *mdv* to run unmodified software)

Copy the *EXEC* file onto the *Quill* cartridge You must also modify the *Quill* 'boot' program so that it runs Capsclock every time you load *Quill* Save a copy of the original boot program first

Change line 8 of 'boot to read *8 EXEC mdv1_capsclock:EXEC_W mdv1_quill* Be careful to place EXEC mdv1_capsclock first You must use *EXEC* rather than *EXEC_W* for mdv1q_capsclock and you must continue to use *EXEC_W* for mdv1_quill Now delete the old version of boot and save the modified program as the new 'boot file

Of course, there's no point in adding a clock to *Quill* if it doesn't tell the correct time – and next week we'll come to the program that does this for you

Meanwhile If you're impatient then a copy of both programs can be obtained on microdrive from David Witherow 19 Glen Lyon St Leonards East Kilbride G74 2JJ, for £4 including P&P

```
10000 CLEAR: start = RESPR(240): REMark CAPSCLOCK loader program
10010 MODE 0: WINDOW 512,256,0,0: REMark Copyright D.G.
      Witherow, 1986
10020 PAPER 2: INK 7: CSIZE 1,0: CLS
10030 AT 7,14: PRINT 'to leave out checksums press SPACE;'
10040 AT 9,11: PRINT 'press any other key to include checksums'
10050 check_flag = 1
10060 a$ = INKEY$(-1): IF a$ = ' ': check_flag = 0
10070 CLS: WINDOW 272,200,120,40
10080 error_flag = 0: byte = 0
10090 FOR line_number = 20010 TO 20300 STEP 10
10100    line_sum = 0
10110    FOR lpos = 1 TO 8
10120       READ number
10130       line_sum = line_sum + number
10140       POKE start + byte, number
10150       byte = byte + 1
10160    END FOR lpos
10170    READ checksum
10180    IF check_flag = 1 THEN
10190       IF checksum <> line_sum THEN
10200          error_flag = 1
10210          PRINT 'ERROR in line: ';line_number
10220       END IF
10240 END FOR line_number
10250 IF error_flag = 0 THEN
10260    PRINT 'Name under which file to be saved?'
10270    PRINT '(e.g. mdv1_capsclock): ';
10280    INPUT file$
10290    SEXEC file$, start, 240,100
10300 END IF
```

```
30010 DATA 96,  18,  0,   0,   0,   0,   74,  251, 439
20020 DATA 0,   9,   67,  67,  112, 115, 99,  108, 607
20030 DATA 111, 99,  107, 0,   112, 11,  114, 255, 809
20040 DATA 116, 1,   78,  65,  112, 8,   114, 255, 749
20050 DATA 54,  60,  1,   194, 147, 201, 78,  65,  800
20060 DATA 52,  120, 0,   200, 67,  250, 0,   138, 827
20070 DATA 78,  146, 42,  72,  52,  120, 0,   200, 710
20080 DATA 67,  250, 0,   138, 78,  146, 40,  72,  791
20090 DATA 157, 206, 32,  76,  112, 17,  114, 0,   714
20100 DATA 118, 255, 78,  67,  112, 7,   116, 6,   759
20110 DATA 118, 255, 67,  250, 0,   146, 78,  67,  981
20120 DATA 114, 0,   178, 57,  0,   2,   128, 138, 615
20130 DATA 103, 30,  112, 41,  114, 7,   118, 255, 780
20140 DATA 78,  67,  112, 7,   116, 2,   118, 255, 755
20150 DATA 67,  230, 0,   122, 78,  67,  112, 41,  737
20160 DATA 114, 4,   118, 255, 78,  67,  96,  12,  744
20170 DATA 112, 7,   116, 2,   118, 255, 67,  250, 927
20180 DATA 0,   102, 28,  67,  112, 19,  78,  65,  521
20190 DATA 52,  120, 0,   236, 67,  250, 0,   80,  805
20200 DATA 78,  146, 32,  77,  112, 7,   53,  25,  529
20210 DATA 118, 255, 78,  67,  112, 17,  114, 0,   761
20220 DATA 118, 255, 78,  67,  112, 8,   114, 255, 1007
20230 DATA 118, 5,   147, 201, 78,  65,  96,  138, 846
20240 DATA 0,   0,   0,   7,   0,   120, 0,   10,  137
20250 DATA 0,   142, 0,   246, 0,   0,   0,   4,   412
20260 DATA 0,   54,  0,   10,  0,   114, 0,   236, 414
20270 DATA 0,   0,   0,   0,   0,   0,   0,   0,   0
20280 DATA 0,   0,   0,   0,   0,   0,   0,   0,   0
20290 DATA 0,   0,   0,   0,   0,   0,   67,  65,  132
20300 DATA 80,  83,  58,  32,  150, 190, 32,  32,  697
```

Compatability with CP/M

Dominique Centeno of Lausanne, Switzerland writes

Q I have read that Enterprise has said that its disc controller is fully compatible with CP/M, but I recently heard that its system was able to read MS/DOS files.

Can you tell me if the system is still CP/M compatible?

Furthermore, I would like to know if the Atari and Amiga $3\frac{1}{2}$ inch disc drives are Sony or Shugart type

A The Enterprise disc controller can in fact do both – run CP/M and read MS/DOS files

However the CP/M is, in fact, an emulation, when you buy the disc controller Enterprise gives you an option to obtain the IS-DOS CP/M emulator, which runs the majority of CP/M programs.

The Atari and Amiga discs are Sony style

Whole screen printing

Callum Gibson, of Blairgowrie, Perthshire writes

Q With reference to the letter from M Payne of Coventry published in issue 49 of *Popular Computing Weekly*, the solution you gave to full screen copying on the Spectrum, does not solve the entire problem to print lines 23 and 24 in the screen dumps. Unfortunately the Basic *Copy* command only prints the first 22 lines. The program below will provide a full screen dump on the ZX printer

```
10 Restore  Input "start address",start
20 For I = start to start + 8
30 Read a  Poke I,a
40 Next I
50 Load "" Screen
60 Randomise usr start
70 Data 243,8,192,195,175,14
```

This program can also be used to copy the top few lines only To do this change the 192 in line 70 to eight times the number of lines required.

A Thank you Callum you seem to have caught me out.

Which Drive

Eric Larocque of Romford, Essex, writes

Q I have a BBC B and have been considering buying a disc drive I have considered the $5\frac{1}{4}$ inch Cumana CS400 80 track double-sided drive as it is switchable to 40 track mode and most software is on $5\frac{1}{4}$ inch.

But I have heard that $3\frac{1}{2}$ inch drives are becoming more standard but with not much software yet.

Should I opt for the $3\frac{1}{2}$ inch drive in the hope that software will appear or stick with the $5\frac{1}{4}$ inch drive?

A I suggest the Cumana $5\frac{1}{4}$ inch drive The chances of a sudden rush of software for the BBC on $3\frac{1}{2}$ inch drives is not very likely

Printing parts

Dave Wood of Grimsby South Humberside writes

Q I own a Sinclair printer. After much use the print faded so I decided to clear it. I removed the stylus from the rubber band and put them in cleaning fluid but they were thrown away! Can you print the name and address of a company (if there is one) which, sell them?

A Examine the classified pages for Sinclair parts dealer

Also try Mancomp Ltd, at Printworks Lane, Manchester M19 3JP It may be able to repair it.

BETTER BASIC

by B Andrews-Howe

Initially I was very impressed with my PCW 8256. The machine is a good sound investment – providing a personal micro-computer running CP/M Basic and Dr Logo, and also providing a competent word processor.

The areas which do come in for criticism are the lack of sound, colour and graphics generated from Basic.

Colour, nowadays colour is expected in all computer displays, programmers use it to highlight areas of importance and the massive home computer games base has made colour an essential ingredient of a computer.

Graphics from Basic, another nowadays syndrome, micro-computers have user defineable graphics. This facility, to the small business where someone has enough knowledge to program in Basic, is very important.

Mallard Basic itself is a very strong powerful Basic, which should not present any problems for programmers. It does, however, lack the traditional *CLS* (Clear Screen) command and I would have like to have found a *Print At* or *Print Tab* (COL x, LN x) command. However, the manuals supplied with the machine cannot be described as comprehensive, informative or helpful if one wishes to use them for the purpose of programming. As a direct result of this I have delved into the language to inform myself a little more.

I have found that Mallard Basic offers a lot more than can be found in the instruction manuals with *Inverse*, *Beeps*, *Print At's* etc.

Because I initiate most of my programs in Basic I like to write a little bit of program which is useful, functional and is in all my programs. This is the program listed below.

Block Graphics, yes you can have block graphics. A Block Graphic is a filled-in space, so all I needed to do was define a filled-in space.

Def FNb$ = Chr$(27) + Chr$(112) + " " + Chr$(27) + Chr$(113)

It actually worked! Now anywhere I Printed *FNb$* I had a Block Graphic nearly square and remembering back to the days of the ZX81, you can do a lot with one single Block Graphic.

The next command I like to use is the Clear Screen command. It keeps things tidy and makes for better presentation. This one was fairly easy as I found it hidden away in Manual (2) on Page 32. Again I thought it best to define what I wanted.

Def FNcls$ = Chr$(27+ 'E' Chr$(27)+ 'H''

Again, it worked. It is simpler than the manual and is called up by a *Print FNcls$* command.

The *Print At* command is the command which makes Basic a pleasing and clear language to program with. Again the manual provides a rather clumsy method to provide a *Print At* command. I prefer to define such things.

Def FNat$(y,x text$) = Chr$(27) + "Y" + Chr$(32+ y) + Chr$(32+ x) + text$

And another command which works, called with *Print FNat$(col X, ln y, text)* which means you can input or Print anywhere on the screen and produce a very smooth display.

How about the sound? Well, it's a rather weak 'Spectrum' type *Beep* actually but, if you put it in a loop, apart from driving people nuts, it can serve as an attention seeker for the screen display or a warning that people are not doing what you want them to do in your program.

Print FNat$(0,0," "),Chr$(7),

That's it, a simple *Beep*, which with loops and timing loops can become a complex sound array.

Inverse printing can be obtained by defining an *Inverse On* and an *Inverse Off*, but for simplicity the following lines may be added to your program,

Print Chr$(27) Chr$(112) (this will cause inverse to start, anything now printed will be in inverse print)

Print Chr$(27) Chr$(113) (this will cause inverse to stop, all printing will return to normal)

If you wish to define an ON and OFF, the format of your instructions should be,

Def FNon$ = Chr$(27)+ Chr$(112)

Def FNoff$ = Chr$(27)+ Chr$(113)

Then the format of your program line should be, *Print FNon$*, (to start) and *Print FNoff$* (to stop).

The Amstrad PCW 8256 has a small bank of built-in graphics, nothing spectacular, more similar to the Commodore type, very handy for applications programs such as files, accounts, etc.

The graphics are called up using *Chr$(128)* to *(Chr$(159)* (*Chr$(167)* contains a Dagger). You can define a block if you wish or assign each to a string variable.

Always use Rem to label your subroutines on the 8256 because you can end up lost if you press Renumber. Always clear the screen on program initialisation – the system used can produce the unexpected.

If you want an *Input* without the "?" try using an *Inkey$* sub-routine to read the keyboard and assemble the result in a variable. And if you are writing in Basic and you want to keep your program secret, when you save it, end your command with a "P" and your program cannot be listed.

```
10 DEF FNcls$ = CHR$(27) + "E" + CHR$(27
) + "H" : DEF FNat$(y,x,text$) = CHR$(2
7) + "Y" + CHR$(32+y) + CHR$(32+x) + tex
t$ : REM CLS COMMAND & PRINT AT COMMAND
20 PRINT FNcls$ : ds$ = CHR$(133) : llc$
 = CHR$(131) : lrc$ = CHR$(137) : ls$ =
CHR$(136) : ulc$ = CHR$(134) : urc$ = CH
R$(140) : lc$ = CHR$(140) : ls$ = CHR$(1
54) : cr$ = CHR$(159)
30 DEF FNb$=CHR$(27)+CHR$(112)+" "+CHR$(
27)+CHR$(113)
40 FOR t= 0 TO 20: PRINT FNat$(0,0," ");
 CHR$(7); : NEXT
45 REM LINES 50 to 120 DEMONSTRATE MOST
OF THE DEFINED COMMANDS
50 PRINT FNat$(1,1," ");"
                    "
60 PRINT FNat$(2,1," ");"
    ";FNb$;FNb$;FNb$;"              "
70 PRINT FNat$(3,1," ");"
    ";FNb$,"  ";FNb$;"     ";FNb$;"     "
80 PRINT FNat$(4,1," "),"
   ";FNb$;" ",FNb$," ";FNb$;FNb$" ",FNb$
;FNb$;FNb$;FNb$;FNb$;"  "
90 PRINT FNat$(5,1," ");"
  ";FNb$," ",FNb$," ";FNb$FNb$;FNb$;"  "
;FNb$;FNb$ FNb$,"  "
100 PRINT FNat$(6,1," "),"
 ";FNb$;FNb$;"     ";FNb$;"    ";FNb$,FNb$
;FNb$;FNb$;FNb$;"  "
110 PRINT FNat$(7,1," ");"          ",FNb
$;FNb$;FNb$,"    ";FNb$,"     ";FNb$;FNb$;
FNb$;FNb$;FNb$;FNb$,"    ";FNb$,FNb$;FNb$
120 PRINT FNat$(8,1," "),"       ",FNb$,F
Nb$,FNb$;FNb$;"  ";FNb$;FNb$;FNb$;FNb$;F
Nb$,FNb$;FNb$;" ";FNb$;FNb$;FNb$;' ";FNb
$;"      ",FNb$;FNb$
```

Tag on QL
by C Harvey

After experiencing first hand and reading of others frustrations with the syntax when accessing microdrives, it seems to me that something simple that meets the following requirements is essential when using Superbasic

a) Simplifies the use of *Dir*, *Load* *Save* and *Delete*

b) Allows easy back-up of programs

c) Gives automatic check that *Save* or *Delete* has been successful

d) Is available at all times whilst using Superbasic and microdrives

Commands

ca(Enter) gives a *Dir* of each drive displayed side by side

sa(Enter) Prog name (Enter) *Saves* program to each drive and displays *Dir*

de (Enter) Prog name (Enter) *Deletes* from each drive and displays *Dir*

lo (Enter) Prog name (Enter) *Loads* prog from Drive

```
32000 REM TAG  REM the idea is to "TAG" it to each basic program
32001 REM Copyright C.W.Harvey
32002 REM
32003 BAUD 2400       REM Set to baud for own printer.
32004 DEF PROC ca  REM displays directory of each microdrive.
32005 CLS CLS#0 OPEN#6 scr_212x216a40x0 PAPER#6,7 CLS#6 INK#6 0
32006 OPEN#7,scr_212x216a260x0 PAPER#7,7 CLS#7 INK#7 0
32007 DIR#6, mdv1_ DIR#7 mdv2_ CLOSE#6 CLOSE#7
32008 END DEF
32009 DEF PROC sa  REM saves program to each microdrive then
      shows directory.
32010 INPUT#0 'Program name' zzz$
32011 FOR zzz=1 TO 2 SAVE "mdv"&zzz&"_"&zzz$
32012 ca
32013 END DEF
32014 DEF PROC de  REM deletes program from each microdrive then
      shows directory.
32015 INPUT#0, 'Program name',zzz$
32016 FOR zzz=1 TO 2 DELETE "mdv"&zzz&"_"&zzz$
32017 ca
32018 END DEF
32019 DEF PROC lo  REM loads named program from microdrive 1.
32020 INPUT#0 'Program name',zzz$
32021 LOAD "mdv1_"&zzz$
32022 END DEF
```

Function Drawer on Commodore 64
by John McCaskie

This program is very useful when a rough graph of a function is needed in algebra. The program draws the X and Y axes in green and the function in black. The function is put in Line 180 along with its name. Any function can be used but the scale in lines 100-120 may need to be altered

Line No	Program Notes
30	– Open channels to printer
50-80	– Draw axes
100-130	– Draw function
140	– Name function
180	– *Define function and name*

```
10 REM          FUNCTION DRAWER
        COMMODORE 64 + PRINTER PLOTTER
20 REM   BY JOHN MCCASKIE
30 OPEN4,6:OPEN1,6,1:OPEN3,6,3:OPEN2,6,2
40 REM DRAW AXES
50 PRINT#2,2:PRINT#3,0
60 PRINT#1,"M",0,-300:PRINT#1,"I"
70 PRINT#1,"J",479,0
80 PRINT#1,"R",240,300:PRINT#1,"J",240,-
300
90 GOSUB180
100 PRINT#1,"R",180,FNA(-6):FORT=-6TO6
110 PRINT#2,0
120 PRINT#1,"J",240+(T*10),FNA(T)
130 NEXT
140 PRINT#4,A$
150 END
160 REM******************************
170 REM***PLACE FUNCTION BELOW HERE***
      ******************************
180 DEFFNA(X)=X↑3:A$="Y=X↑3
190 RETURN
```

Seeker on Spectrum
by R Luxton

Seeker is a short program for the Spectrum, to seek out the lines in which tokens are used. The seven-line program should be Merged at the end of the Basic program after which enter *"Run 9993"*

The program will then ask you to enter the token you seek. Sinclair Basic does not allow a token to be entered directly in this mode, but if it is preceded by *"Then"*, the token can then be entered by the usual single keystroke

Thus, if you want to know on which lines in the Basic program the keyword *"Print"* is used enter *"Then Print"* using just two keystrokes, backspace to the point between *Then* and *Print* and press the *Delete* key

```
9993 GO SUB 9999: CLS : INPUT "Token sou
ght ? ";a$: LET q=CODE a$
9994 IF FN c()=9993 THEN  STOP
9995 FOR j=FN a() TO FN b(): IF PEEK j<1
65 THEN  GO TO 9997
9996 IF PEEK j=q THEN  GO TO 9998
9997 NEXT j: LET s=FN b()+1: GO TO 9994
9998 BEEP .25,30: PRINT STR$ FN c();TAB
5; PAPER 6;CHR$ PEEK j: GO TO 9997
9999 LET s=23755: DEF FN a()=s+4: DEF FN
 b()=s+3+PEEK (s+2)+256*PEEK (s+3): DEF
FN c()=256*PEEK s+PEEK (s+1): RETURN : R
EM *Seeker* R.G.Luxton.
```



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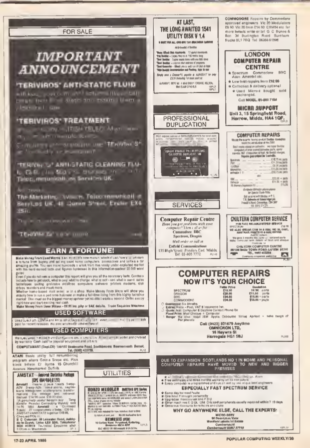
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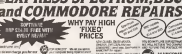
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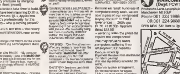
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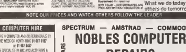
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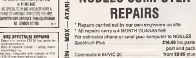
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New Releases

Graham Taylor looks through this week's new arrivals

Amstrad

Program *Alien Highway* **Type** Arcade **Machine** Amstrad **Price** £8 95 **Supplier** Vortex Software 24 Kansas Avenue Salford

Program *Doomsday Blues* **Type** Arcade **Machine** Amstrad **Price** £9 95 **Supplier** PSS 452 Stoney Stanton Road, Coventry

Program *Get Dexter* **Type** Arcade **Machine** Amstrad **Price** £9 95 **Supplier** PSS as above

Program *Into Oblivion* **Type** Arcade **Machine** Amstrad **Price** £1 99 **Supplier** Mastertronic, 6-10 Paul Street, London EC2

Program *Zoids* **Type** Arcade **Machine** Amstrad **Price** £8 95 **Supplier** Martech Bay Terrace Pevensey Bay E Sussex

Program *Samantha Fox Strip Poker* **Type** Utility! **Machine** Amstrad **Price** £8 95 **Supplier** Martech as above

Program *Vegas Jackpot* **Type** Strategy **Machine** Amstrad **Price** £1 99 **Supplier** Mastertronic, as above

Atari

Program *Crusade in Europe* **Type** Strategy **Machine** Atari **Price** £14 95 **Supplier** US Gold Unit 10 Parkway Industrial Estate, Heneage Street Birmingham

Program *Quest Probe* **Type** Arcade **Machine** Atari **Price** £9 95 **Supplier** US Gold, as above

Program *Vegas Jackpot* **Type** Strategy **Machine** Atari **Price** £1 99 **Supplier** Mastertronic, as above

BBC

Program *Bruce Lee* **Type** Arcade **Machine** BBC **Price** £9 95 **Supplier** US Gold, as above

Program *Bug Eyes 2* **Type** Arcade **Machine** BBC **Price** £7 95 **Supplier** Audiogenic, 12 Chiltern Enterprise Centre Station Road Theale Berks RG7 4AA

Program *Quill* **Type** Utility **Machine** BBC **Price** £16 95 **Supplier** Gilsoft 2 Park Crescent, Barry, S Glamorgan CF6 8HD

Commodore

Program *Art Ease* **Type** Utility **Machine** Commodore 64 **Price** £9 95 **Supplier** Gilsoft as above

Program *Crusade in Europe* **Type** Strategy **Machine** Commodore 64 **Price** £14 95 **Supplier** US Gold as above

Program *Quest Probe* **Type** Arcade **Machine** Commodore 64 **Price** £9 95 **Supplier** US Gold as above

Program *Sci Fi Trader* **Type** Strategy **Machine** Commodore 64 **Price** £9 95 **Supplier** US Gold as above

Prpgram *RSM Titanic* **Type** Strategy **Machine** Commodore 64 **Price** £9 95 **Supplier** Electric Dreams Software 31 Carlton Crescent Southampton, Hampshire SO1 2EW

Electric Dreams has an erratic record on software – *Back to the Future* was pretty awful – *RMS Titanic* is a stunner

The object of the game is to undo the work of an iceberg and raise the Titanic from its grave beneath the Atlantic Play takes place in two locations on-board your support vessel and in the ghostly remains of the Titanic itself

The game itself is an engrossing combination of adventure and strategy You need to keep your financial backers happy by securing good publicity, as well as getting results on the ocean floor

But the main action takes place within the Titanic as you explore in a miniature submarine Many locations are open to you but there are plenty of locked doors in the way The end result of these puzzles will be to locate six flotation bags

RMS Titanic will appeal to adventurers, strategists and puzzle freaks alike, and should be an enormous hit

Plus 4

Program *Grandmaster Chess* **Type** Strategy **Machine** Plus 4 **Price** £8 95 **Supplier** Audiogenic as above

QL

Program *Baron Rouge* **Type** Arcade **Machine** QL **Price** £17 00 **Supplier** Labochrome 173 rue de Fragnée, B-4000 Liege Belgium

Program *Gwendoline* **Type** Arcade **Machine** QL **Price** £18 00 **Supplier** Labochrome as above

Program *QL Ram Utilities* **Type** Utility **Machine** QL **Price** £14 95 **Supplier** DS Enterprises 25 Trinity Rise London SW2 2QP

Program *Sign Designer* **Type** Utility **Machine** QL **Price** £18 95 **Supplier** DS Enterprises as above

Pick of the week

Starstrike II

Program *Starstrike II* **Type** Arcade **Price** £7 95 **Micro** Spectrum **Supplier** Realtime Software, Prospect House, 32 Sovereign Street, Leeds LS1 4BJ

Starstrike II is in some ways the most impressive 3D space game ever seen on the Spectrum Certainly in terms of pure graphic impressiveness it is difficult to see how much more could possibly be achieved on Amstrad's latest acquisition

The difference between *Starstrike II* and other 3D shoot-em ups is simply this – all the graphics are solid, given different kinds of shaded fill to provide a convincing illusion of real substance The effect is quite stunning

If *Starstrike II* beats *Elite* hands down on graphics, its plot is perhaps a little weaker Essentially the game comes down to blasting and docking Your simple objective is to clear Federation (*Star Trek* has so much to answer for) space by knocking out all enemy bases

Bases are defended to various levels depending on their status – military, industrial agricultural To destroy a base you must, a) get hyperspace travelling gear by docking with a support module, b) select the system and planet for attack, c) squeeze through a small opening in a giant space grid blasting at countless aliens as you go, d) blast away and destroy all the defences of the planet e) fly over the planet surface blasting at more defences f) fly down the ventilation duct (shades of *Star Wars* again) and, finally g) blast either a reactor system, battle computer or agricultural control centre and escape

There are a few other things – some neat-looking giant space wheels you can destroy by (here we go again) a) blasting away defence pods b) successfully docking or, c) blast the internal control units You may also find fuel pods floating around after you have destroyed an enemy ship – these can be picked up

It's good blasting fun and technically and visually excellent.

I'm not sure that there is really much to the game beyond the several types of blasting, but perhaps that doesn't matter There is enough here to make a good many space cadets go gaga Good also to see Realtime maintaining the middle pricing ground

Spectrum

Program *Alien Highway* **Type** Arcade **Machine** Spectrum **Price** £7 95 **Supplier** Vortex as above

Program *Challenge* **Type** Strategy **Machine** Spectrum **Price** £5 95 **Supplier** Azed Software 3 Victoria Gardens Henstridge Templecombe Somerset BA8 0RE

Program *Cyberun* **Type** Arcade **Price** £9.95 **Micro** Spectrum **Supplier** US Gold as above

Cyberun is the first new Spectrum title from Ultimate to be issued under the new deal with US Gold

Much has been expected from it – what could Ultimate do once the business of marketing and promotion was removed from its concerns and it could be left to do what it undoubtedly does best – developing new software?

Cyberun returns to the style of graphics – large detailed sprites – associated with ancient Ultimate titles like *Jet-Pac* In fact much of *Cyberun* reminds me of *Jet-Pac* and *Lunar Jetman* Big, faintly comic aliens, collecting the parts of your vehicle (in this case a whizzo spaceship) and blasting things Just like *Jet-Pac* you collect things by crashing into them (basically) and from time to time must refuel

Your task is to mine the planets of the Zeberema system for cybertron which is a really useful substance There are inevitably, countless alien hordes who must be blasted to bits or at least avoided, quite apart from negotiating a series of caverns beneath the planet's surface, in a sort of *Caverns of Mars* section to the game

As a space blasting game – *Cyberun* is not bad but it looks positively dated – I could easily believe it was written two years ago and was recently discovered underneath a pile of dust in some corner of Ultimate's laboratory Innovative it isn t, fun to play maybe, in a nostalgic sort of way, but really a disappointment What on earth is Ultimate doing?

Program *Green Beret* **Type** Arcade **Price** £7.95 **Micro** Spectrum **Supplier** Imagine, 6 Central Street Manchester M2 5NS

Green Beret is another one of those games like *Commando* in which a lone American psychopath rescues the world from the Communist threat by killing a vast number of people with a variety of weapons It s a good game, though

It s based closely on the arcade game of the same name and is stab, shoot, blast and dodge in the classic tradition In fact the game reminds me a little of *Hunchback* It is divided into various segments – the missile base harbour, bridge and prison camp As your hero runs left and right a suitably military-looking background scrolls behind him Waves of assorted Eastern Bloc types come rushing in stabbing shooting and leaping (Cossacks obviously) their little red hearts out

Dealing with the assorted enemy soldiers is a matter of climbing ladders to higher platforms jumping over them and of course stabbing them (a stabbed baddy first turns to a skeleton before kicking the Samovar — a tasteful touch) If you manage to kill the commandant in an attack wave you suddenly get a weapons system which can wipe out several baddies in one blast – it runs out after three blasts however

It s very fast very brutal and very addictive A classic case of the 'just-one-more-goes was had by all in the office who tried it At £7.95 for the Spectrum version it isn't too expensive either

Program *Bounces* **Type** Arcade **Price** £7.95 **Micro** Spectrum **Supplier** Gremlin Graphics, Alpha House 10 Carver Street Sheffield S1 4FS

Program *Henry s Hoard* **Type** Arcade **Price** £1.99 **Micro** Spectrum **Supplier** Alternative Software Balleygate Industrial Estate, Pontefract W Yorks

Program *Ticket to Ride* **Type** Arcade **Price** £1.99 **Micro** Spectrum **Supplier** Mastertronic, as above

Program *Phonenix* **Type** Arcade **Price** £1.99 **Micro** Spectrum **Supplier** Alternative Software, as above

Program *Sky Ranger* **Type** Arcade **Price** £1.99 **Micro** Spectrum **Supplier** Mastertronic, as above

Program *Knight Tyme* **Type** Arcade **Price** £1.99 **Micro** Spectrum 128 **Supplier** Mastertronic as above

Program *Quazatron* **Type** Arcade **Price** £8.95 **Micro** Spectrum **Supplier** Hewson, Milton Industrial Estate Milton Abingdon, Oxon

Program *Rebel* **Type** Arcade **Machine** Spectrum **Price** £8.95 **Supplier** US Gold as above



Program *V* **Price** £9.95 **Type** Arcade **Micro** Spectrum **Supplier** Ocean 6 Central Street Manchester M2 5NS

V the mini series was incredibly successful but that was a while ago *V* the TV series is not very successful (but a lot funnier) and crops up at obscure hours on regional TV Doesn t this represent a smart marketing move by Ocean?

V the game is not bad It is far more related to *Impossible Mission* from Epyx than to the details of the TV show and that perhaps is a good thing The objective of the game is to plant explosives at key points on the visitors mother ship This involves dodging various kinds of robot whose blast can (eventually) kill you and getting through a series of security doors to reach the key areas Access is achieved by discovering secret door codes and using a hand-held computer to enter them into the system The section of the game is essentially a sort of logic puzzle as you try to match a pattern of shapes

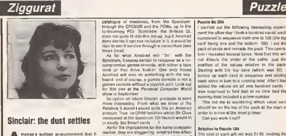
A side plot involves discovering the parts of a formula (hidden in various laboratories around the ship) for red dust and then releasing the dust into the air purification plant – this topples aliens like nine pins

There are two control modes left, right and fire when Donovan is searching the ships endless corridors There s also an icon-like arrow cursor system which selects various options from Donovan's hand-held computer – used, for example when discovering security codes

Graphically the game is detailed and avoids most of the colour-res problems usually associated with detailed sprites moving over a detailed background However things are curiously indistinct sometimes Donovan seems to get lost in the background In addition there is a decided lack of variation – those endless corridors all look pretty much the same Perhaps that s the point though

V is a reasonable effort and is certainly worth a look

Program *Wordsearch* **Type** Strategy **Machine** Spectrum **Price** £5.95 **Supplier** Azed Software as above



Sinclair: the dust settles

Amstrad's sudden announcement that it was buying Sir Clive Sinclair's computer business took so many people by surprise that it was a while before the implications of the deal became apparent. Alan Sugar and Sir Clive Sinclair make very unlikely partners. Sir Clive may have admired Amstrad's marketing prowess, but he didn't think much of its technical innovation, and Alan Sugar has been wont to refer to Spectrums as pregnant calculators.

The questions taxing most people by the next morning were: Why has Amstrad done this, what will it do with Sinclair's products, and what does this mean for the UK computer market?

Alan Sugar answered these questions rather off-handedly at the press briefing, as though he had not really thought his plans through. This has got to be nonsense. £5 million may not be a vast sum of money to Amstrad at the moment, but you can be sure Alan Sugar isn't going to take on Sinclair's computers without being 100% certain what he plans to do with them.

Amstrad has ostensibly done this because Sinclair has dominated the entertainments market in Europe for years ... because "an ongoing entertainments market is viable". Sugar saw the potential of a purely games machine on a recent visit to Japan, where Nintendo has recently notched up nine million sales of its games console. Amstrad's own nearest competitor to the Spectrum, the CPC464 has not been manufactured for sale in this country some time, so it looks as though the new souped-up Amstrad-Spectrum will become Amstrad's sole games-orientated machine.

But the deal gives Amstrad an all-embracing catalogue of machines, from the Spectrum through the CPC6128 and the PCWs, up to the forthcoming PCs. Somehow, the ill-fated QL does not quite fit into this set up, but if Amstrad does decide it can see no future in it, it would be nice to see it survive through a consortium (see News Desk).

As for what Amstrad will "do" with the Spectrum, it seems certain to reappear as a no-compromise games console, with either a tape deck or disc drive built-in. One only hopes Amstrad will also do something with the keyboard, and of course, a games console is not a games console without a joystick port. Look out for this one at the *Personal Computer World* show in September.

Its option on future Sinclair products is even more interesting. From what we know of the Pandora it doesn't sound quite like an Amstrad product. True, the CP/M facilities which Sir Clive mentioned at the Spectrum 128 launch would fit in nicely, but Smart cards ... ?

As for the implications for the home computer market, they are staggering. Amstrad has effectively bought it, lock, stock and barrel. None of cash troubled Commodore's investment is going down into the (purely) entertainments sector after the failure of the C16, the aging of the 64 and Commodore's emphasis on the C128s as more serious upgrades.

Atari's plans for its 8-bit range mainly concern adding word processor packages, although it is hoping for a revival in the VCS field, but Atari would get most upset if anyone said its STs were entertainment micros. Acorn, as we all know, removed itself from the home market some time ago.

Also that's only in the UK. Amstrad has a very strong presence in Europe, particularly France, Germany (where the machines are badged Schneider) and Scandinavia. The Spectrum is strong in Spain, and according to market research company IDC, Sinclair was the second highest shipper (to Commodore) in Europe in 1984 with 28% of total deliveries. The new signing thus gives Amstrad an even stronger European base – and more than half of Amstrad's turnover is now coming from overseas.

Any deal for Sinclair now is good news. This one has secured the future of Spectrum for at least a year. The QL looks likely to survive in one form or another, and Sir Clive has got some initial financial backing for his own projects.

I wouldn't worry too much about Sir Clive either – he'll be back. I don't know what kind of product will signal his return to the forefront of innovative technology, but I don't mind betting it will be very small, and very black.

Christina Erskine

Puzzle No 204

I carried out the following interesting experiment the other day: I took a hundred cards, each numbered in sequence from one to 100 (the top card being one and the bottom 100). I cut the pack of cards and remade the pack. This operation I repeated several times. Note that this will not disturb the *order* of the cards, just the position of the values relative to the pack. Starting with the top card (which was 32) I turned up each card in sequence and adding each value in turn to a running total. After I had added the values on all one hundred cards I was surprised to find that at no time had the running total included a prime number.

This led me to wondering which value card should be on the top of the pack at the start in order to arrive at the *most* primes.

Can you work it out?

Solution to Puzzle 199

The cost of each gift set was £1.95, making the total for from 2 to 9 sets equal to £3.90, £5.85, £7.80, £9.75, £11.70, £13.65, £15.60, £17.55.

```
10 FOR N=1 TO 999
20 LET N$=STR$(N)
30 FOR F=2 TO 9
40 LET F$=STR$(F*N)
50 LET N$=N$+F$
60 NEXT F
70 LET T=0
80 FOR D=1 TO LEN(N$)
90 IF MID$(N$,D,1)="2" THEN LET T=1
100 NEXT D
110 IF T=0 THEN PRINT N
120 NEXT N
```

We need a number, the product of which will not contain '2' when multiplied by integers from 1 to 9. In the program a starting value is set up in the *For/Next* loop at Line 10. This is the price in pence of a single item. The value is converted into a string variable *(N$)*. Variable N is then multiplied in turn by factors of 2 to 9, each product converted to a string and added to string *N$*. The resulting string is scanned for the digit 2 in lines 70 to 100.

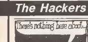
An upper limit of £9.99 is set as the problem states each item is under this amount.

Winner of Puzzle No 199

The winner is Mr L E Davies of Wilson Rd, Derby, who will be receiving £10.

Rules

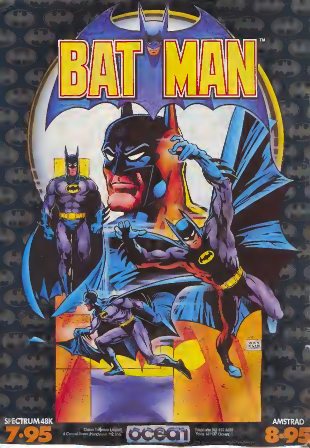
The closing date for puzzle 204 is May 13.



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